THE PALESTINE EXPLORATION FUND.

THE SURVEY.

The following are extracts from letters received during the past quarter from Mr. C. F. Tyrwhitt Drake. They contain much which will be read with great interest by the subscribers:—

I.

YAZUR, NEAR JAFFA, *April* 15, 1872.

On the 3rd inst. we pitched our camp here, as I was anxious to fill in this piece of country before the hot weather came on, deeming it most unadvisable to expose men new to the climate to the great heat of the maritime plain in summer. Even at this early season we have had some warm days, on which the thermometer has been above 80° F. in the shade. There is yet another reason for avoiding the plain in summer, namely, the impossibility of distinguishing small objects, such as poles, cairns, &c., at a distance of six or seven miles, owing to the mirage, which makes a hill-top observed through the glass undulate like the sea during a heavy ground-swell, or rather, waves of semi-opaque air seem interposed between the observer and the distant point. As this has already proved a considerable hindrance to us, I intend to move up into the mountains for the rest of the summer as soon as the immediate neighbourhood is finished. In this light stoneless soil it was a matter of some difficulty to put up suitable objects to observe to; we have found a pole, firmly stuck in the ground and swathed with bundles of dry grass or small bushes, to answer the purpose very well.

Owing to the constantly recurring annoyances to which we were subjected by the fellaheen, I have judged it advisable to attach a *kheyal* (one of the irregular horse supplied by Government) permanently to the camp, as it stamps the expedition with Government authority, and keeps the natives in check. As the fellaheen are men who will hold up their right hands and swear by God and the prophet, by my life and by their own, that they love me better than their fathers or their brothers, that they are my slaves. &c., &c., and at the same time will filch with their left hands, it is as well to have some little show of authority.

Most tourists who pass through Jaffa doubtless know that a German colony flourishes there, and many may have seen the Jewish Agricul-

tural School, situated some two and a half miles S.E. of the town on the Jerusalem road. Few, in all likelihood, will have had time or opportunity to learn more than some main facts regarding them. I have therefore collected information which will, I think, prove generally interesting. This being derived from all sources, frequently contained the most decided contradictions, as each native interested in the matter gave his own colouring to it, and the truth could only be found by carefully sifting the evidence. I must take this opportunity of thanking M. Netter for the great courtesy and openness with which he supplied me with information on the subject.

The "Mikveh Israel," as the Agricultural Institution of the Universal Israelitish Alliance has been named, covers 2,600 dillem (1 dillem = 1,600 square pics; 1 pic = 0·76 metres), or 316 hectares, which equal 781 acres, and of this one-third has been newly brought under the plough. This land is to be held free for ten years, and after that to pay a quit-rent of £70 Turkish, or £68 sterling. Before the land was granted by the Sultan for the purpose of founding an agricultural school, it was cultivated by the villagers of Yazúr, and though the land belongs to Government, the fellaheen, from long usage, have got to look upon it as virtually their own, and resent its occupation by any other person. In this case the men of Yazúr—a village with a mixed population well meriting the bad reputation it enjoys—were particularly enraged, as it had for a long time been their custom to plant gardens on the extreme edge of the land they cultivated, and then sell them to the people of Jaffa, in this way disposing of crown land for their own benefit. Thus cut off, by the interpolation of the Jewish colony, from a source of large revenue, they naturally became bitter opponents of the Agricultural School, which at this moment, however, employs from 80 to 100 fellaheen, who are chiefly from Yazúr, a small number being from Sélameh, Beit Dejjan, and the neighbouring villages. A larger proportion of Yazúr men was formerly employed, but they were found so dishonest that it was necessary to discharge them.

After some delay 1,600 dillem were allotted to the village of Yazúr from the Beit Dejjan territory, which is very large, as compensation for what had been taken away on the other side. Still the fellaheen complain that they were not paid for land which they own to be Government property! I can only say that it would be a most excellent thing if the Government set aside its dislike to selling land to foreigners. With proper guarantees a large proportion of this country would find a ready market, and then the present fellah would be either eliminated or converted into a useful member of society, while the increase of revenue to the Turkish Government would be very considerable.

The men of Yazúr vow that they are completely ruined, but they were still able, some three months ago, to offer 65,000 piastres (£520 sterling) for 4,000 dillem of land which the Government wished to dispose of to the south of their village. One party, led by the Mukhtar (Headman) Mahmúd, is a violent opponent to the institution, but a large

section of the villagers who work on the estate, and receive from three and a half to five piastres (75 cents to 1 franc) per diem, are content with the arrangement.

The object of the Agricultural School is to train up children to a useful and industrious course of life; to teach them market-gardening rather than farming, as the former is always a profitable pursuit in the neighbourhood of towns, and the latter, owing to restrictions imposed by the Turkish Government, and jealousy of the fellaheen, is very precarious. A practical knowledge of land-measuring will also be taught, and will doubtless obtain Government employment for some of the pupils; native surveyors being generally incompetent and always open to a *douceur*, both of which qualities are found to have their disadvantages.

The school has been opened since July, 1870, and now has twelve pupils (viz., one accountant, three shoemakers, one farrier, four gardeners, two carpenters, and one agriculturist), but it is hoped that sufficient buildings will be ready to receive twenty-eight more at the end of the summer. At present all the pupils are Jews, but, according to the agreement with the Sultan, both Christians and Moslems are to be admitted on payment. One primary difficulty now being overcome is the establishment of a common language, without which it would be impossible to enter upon any course of instruction, as some spoke Spanish, others German, Polish, or Russian. French is the language adopted, and with success. It is hoped, when funds permit, to increase the number of pupils to one hundred, and to establish a school for the same number of girls. It is proposed to cultivate fruits and vegetables of many kinds, which will doubtless find a ready market at Jaffa, especially during the tourist season; at Port Said, where the rapidly increasing number of vessels passing through the Suez Canal will ensure a constant demand; at Jerusalem, where there is a large resident European body of consuls, clergy, &c., and, to some extent, at Beyrout. Twelve steamers belonging to three companies touch monthly at Jaffa, and might be looked to not only as a means of transport, but as consumers.

Trees are to be cultivated, and M. Netter tells me that the nursery already contains more than 100,000 plants of different kinds, and that half a million of vines are also planted. As the land borders on the sandhills, which are rapidly advancing in a north-east direction, it is proposed to plant a belt of *pinus maritima* along the edge of the dunes. In some places, already covered with sand, it is found to be no more than one metre in depth; in time it is intended to clear this away. The rate at which the sandhills advance is, of course, very difficult to determine, but it seems to be about two to three yards per annum, judging by the rate at which it is overwhelming a garden to the south of this village computed by a comparison of several independent testimonies. At the Jewish colony, however, the rate would not be nearly so great.

It is also proposed to cultivate flowers for making scents, to make

olive oil and soap, and to tan the skins, which are exported raw at a low price and brought back again as costly leather.

By these means it is hoped not only to make the Agricultural Institute a means of bettering the condition of the Palestine Jews, but also a successful mercantile operation. Whether the latter comes to pass or not, the former consideration is enough to recommend it to the attention of those Jews in Europe who are really anxious to improve the degraded state of their co-religionists in Palestine.

The German colony at Jaffa next deserves our attention. As it is the result of a religious movement, a few words of preface are necessary to explain the reason of its existence there.

Some fifty years ago a society was formed by Dr. J. A. Bengel, the well-known author of the Gnomon of the New Testament, at Kornthal, Würtemburg, in expectation of being called in some direct manner to the Holy Land. After a time this body dissolved itself, and the present society, called "The Temple," was founded, or rather revived, on the principles of the former, by Herr Christopher Hoffman, son of one of Dr. Bengel's co-operators. He was presently joined by Herr G. D. Hardegg, who is president of the Haifa, as Herr Hoffman is of the Jaffa colony. The society has members in Russia and America, but chiefly in Germany. It is called "The Temple" from the belief of its members that they are fulfilling Scripture by founding a spiritual temple in Palestine. Their doctrines are set out at length in several publications printed at Stuttgart and elsewhere in Germany and America. Land is bought as occasion serves by the committee in Palestine, and allotted at cost price to members enrolled in Europe. As yet Haifa and Jaffa are the only places where land has been bought. There are, however, some fifty members of the society at Jerusalem, twenty-five at Beyrout, and a few at Alexandria; these are all either domestic servants or artisans.

The Haifa colony was founded in October, 1868, and now numbers some 300 souls. Twenty-four stone houses have already been built there. A grant of between five and six thousand acres has also been promised them by the Turkish Government on Mount Carmel. On this it is intended to build a town and cultivate the soil, devoting especial attention to vine-growing. In this colony there are five families of American citizens, German by birth.

The Jaffa colony was founded six months later, and began by gradually buying from private individuals the houses built by the American colony which had been tried there and failed. Eight of these houses were so bought, and afterwards five others in or near Jaffa. Ten others are either built or in course of construction at Sarona, some two and a half miles N.E. of the town.

There are about 100 men, 70 women, and 35 children in the colony. (The total number of members in Germany amounts to about 5,000 souls.) The trades are distributed as follows:—2 doctors, 1 engineer, 1 hotelkeeper, 1 watchmaker, 2 joiners, 2 carpenters, 2 masons, 2 shoe-

makers, 2 merchants, 2 blacksmiths, 1 painter, 1 miller, 1 saddler, 1 butcher, 1 baker, 1 gardener, 1 chemist, and 1 locksmith, the rest being mostly farmers.

Some native labourers are employed, chiefly as masons, but a few as artisans and farming men; their wages range from five and a half for ordinary up to twenty piastres a day for skilled labour. The land they have bought contains about 400 acres of arable and two gardens. The former produces wheat, barley, sesame, and potatoes, for home consumption; the latter give vegetables, oranges, peaches, apricots, &c. The colony is self-supporting, but some of the missionary work is aided by contributions from their brethren in Europe and America. The ordinary taxes of *'ashr* (tithe), poll-tax on sheep and cattle, and *ad valorem* on gardens, are paid to the Government as by natives.

At both Jaffa and Haifa there is a school for boys and also for girls. The former are taught Arabic by a native teacher, as well as German, English, French, and mathematics, and in the higher classes Greek, Latin, and drawing. Herr Hoffman is the elder of the society, there being no regular clergy, and meetings for prayer and to discuss the welfare of the society are held in the school. Baptism and communion are optional. The civil register of marriages is kept at the German consulate. Any Christian giving his adhesion to the rules and regulations of the society is allowed to join with them, whether his peculiar tenets would cause him to be classed as Greek or Armenian, Protestant or Roman Catholic.

The climate is found to be healthy, slight fevers being the most common complaint, especially near the town gardens. The new colony at Sarona will probably prove more healthy, being built on a ridge of sandstone, away from vegetation, and exposed to the sea breezes.

The colonists being hardworking, honest men, are well spoken of by the natives, with whom they are on a friendly footing, though, luckily for themselves, they are virtually independent. These two colonies, Semitic and Germanic, though distinct in their aims and working, cannot, I think, fail to have, so far as it extends—for, considering the people whom it is likely to influence, I am not disposed to rate it too highly—a salutary influence in pointing out the advantages arising from careful industry. With all his evil qualities the fellah is not altogether incapable of adopting improvements, especially if likely to produce piastres. If, then, these colonies be encouraged and extended, one may reasonably hope for some slight improvement of the native population in their immediate neighbourhood.

II.

CAMP AT KHIRBETHA IBN HARITH, *April* 28, 1870.

The picture I am going to draw of peasant character in Palestine is not a bright one, and has but few touches of light to relieve its sombreness.

"Eastern life" has become with us in Europe almost synonymous with a life of romance, poetry, houris, and flowers, of gorgeous raiment and matchless steeds, of jewels and luxury. What can be more romantic —in print—than the tameless son of the desert, free as air, chivalrous as Bayard, mounted on his priceless mare returning from a successful onslaught on his foes, to lay the spoils of shawls from Khorassan and Kashmir, silks from Damascus, and gold filigree work from Cairo, at the feet of the dark-browed maiden whose gazelle-like eyes have caused more havoc in the desert than ever did the arrows of Abu Zayd the invincible? Are not the pearls of the harem said to be peerless in beauty and grace, and their wondrous loveliness to overpower the senses like the air heavy with scent of orange flowers and jessamine beneath their own sunny sky? Have not the "Arabian Nights" taught us that rubies as big as pigeons' eggs, and pearls the size of raspberries, are common, while gold is dross to be scattered broadcast to gaping crowds by the princes of Islam? Alas! that truth with one stroke of a realistic pen should destroy this dream of poetry. Let us see the Bedawin as he is. Living under hair-tents, in squalor, filth, and ignorance, his chivalry degenerates into simple freebooting, his priceless mare is—*exceptis excipiendis*—a scraggy, thin-chested, drooping-flanked beast, capable by some peculiar provision of nature unknown to the horse of civilisation, of going long wearisome journeys with little water and less food; her pace, however, is little more than three miles and a half per hour, and if pressed she soon fails. The Bedawin's dark-eyed love is perhaps not ugly at twelve years old, but at twenty she is perfectly hideous and looks forty. From earliest girlhood she is brought up as a hewer of wood and drawer of water. For the first seven or eight years of their lives, all the children play about the ragged tents in happy community of ideas with the kids and lambs, puppies, chickens, calves, and camelets. After that they tend the flocks; at ten or twelve the girls marry, and the boys, so soon as they are grown up, leave all toil to the women and children as unworthy of their manly dignity. A successful foray raises them in the social scale, as a grand *coup* on the Bourse or Stock Exchange does in more civilised lands. Though wealth be power everywhere, it is nowhere more potent than in the East, where competitive examinations and compulsory education are equally unknown. Still a good word may be said for the Bedawin in districts where contact with Europeans has not spoilt them. They are then hospitable after their fashion, always offering a meal to the passing traveller, and though they will do their best to overreach and

cheat in making a bargain, yet once the affair settled and their word given, a breach of faith is seldom, I may even say never, known.

As to the veiled beauties of the harem, we must trust to the perhaps somewhat *ex parte* descriptions of European ladies, and such stray glimpses as chance may show. Neither of them carry out the ideas of loveliness implanted by the "Arabian Nights," and one who has lived in the native quarters of Eastern towns will be well aware that the fair sex is cursed with a most vile shrewish tongue, and makes use of undiluted Billingsgate on the slightest provocation, in tones which force themselves to be heard by all the neighbours.

But to turn to the fellaheen. From earliest infancy they are brought up in utter ignorance; they are never children, the merry laughter and sports of European childhood are here quite unknown. At three years old they are little men and women with wonderful *aplomb*. Tiny dots scarcely able to toddle may be seen gathering *khobbayzeh* (wild mallows) for the evening meal, and when they have filled the skirts of their one wee garment, will trot home as sedately as though the cares of life were already pressing heavily on their shoulders. I have seldom in this country heard a genuine laugh from man, woman, or child; the great struggle for existence seems to have crushed all but fictitious mirth.

The fellaheen boys—very rarely the girls—take charge of the flocks and herds till they are old enough to consider themselves men; thus exposed to all weathers they are as hardy as their charge, but if attacked by sickness one is as little cared for as the other, and chronic coughs, fevers, rheumatism, and ophthalmia, are the consequent results.

The physical and mental degradation of the women, who are mere animals, *proletariæ*, beasts of burden, cannot but have a most injurious effect upon the children. The foul language in common use by men, women, and children, but especially the latter, is startling.

A father's pride in his children is little better than that of the beasts for their offspring; he has no care for their improvement in any way, and consequently they grow up utter savages, never corrected for faults nor praised for doing well—often the reverse—and ignorant to the last degree. Besides this, the children are spoilt, and have their own way completely; if thwarted they abuse their parents and elders, who merely return the abuse with interest. More than once I have had a sick child brought for me to doctor, but on the brat's objecting to have eye-lotion administered, or even to be closely looked at, the fond parent would remark, "Don't um like medicine, then, um shan't have it then," and sent the little wretch away, looking upon me with horror and indignation for suggesting a slight correction.

Privacy is absolutely unknown. Anybody's business is everybody's business. If any transaction, private quarrel, or discussion, be going on, every one present puts in his or her word. Hence in villages where there are two factions, brawls ending in bloodshed have not unfrequently arisen out of petty disputes between women and children. For private

talk it is common to see two or three men seated under a tree in an orchard or olive grove, where there is no possibility of being overheard.

The fellaheen are all in all the worst type of humanity that I have come across in the East. The 'Ammarín and Lyathineh of Petra are perhaps greater ruffians, being beyond the reach of troops, but they are known to be lawless plunderers, and the traveller expects the worst from them. The fellah is totally destitute of all moral sense; he changes his pledged word as easily as he slips off his *abba*; robbery, even when accompanied by violence and murder, is quite in his line, *provided* he can do it with little fear of detection. To one who has power he is fawning and cringing to a disgusting extent, but to one whom he does not fear, or who does not understand Arabic, his insolence and ribald abuse are unbounded. As an instance, I may quote the fact that when we were taking observations from Beit 'ur el Foka, the men were servile and deferential before me, but a few days later one of the non-commissioned officers and a native servant rode past the place, and were abused in most scurrilous language by the children, who were edged on to it by their elders.

I am well aware that this slight though far from hasty sketch will seem overcoloured to many whose acquaintance with the country is but that of a holiday tourist; but a more intimate contact with the people and knowledge of their language would soon modify any favourable ideas based upon their picturesque vagabondism, and the transient skin-deep civility produced by a backshish. The fellaheen themselves have often said to me, with that implied exception in their own favour so characteristic of the semi-savage, "All the fellaheen are liars, poor men always are; we know that the Franks always speak the truth, but our people never do." The Syrian proverb, "Lying is the salt of a man," is characteristic.

Naturally the fellah is not wanting in intelligence; the boys, in the towns, show considerable aptitude for learning till they reach the age of thirteen or fourteen, after which they advance no further. The very early marriages doubtless conduce to this. Still, under a well-regulated system of education, what natural good points they possess would be fostered and encouraged, and in two or three generations the people might be developed into something useful. There is no class corresponding with our landed gentry or large farmers to whom they can look for assistance, and to whose interest it is to help them. Thus till some radical change be effected, little, if any, amelioration in their condition can be looked for.

The other day I was witness to a characteristic little scene. Some four or five soldiers were at the village of Dayr Kadís collecting the poll-tax on goats. One man either could not or would not pay, so the soldiers began to tie his hands together, preparatory to taking him off to prison. While they were thus engaged one of the bystanders rushed in and dealt the prisoner several shrewd knocks on the head

with a heavy stick, abusing him loudly meanwhile, and urged the soldiers to beat him, to which one of them complied by prodding him with the heavily ironed butt end of his lance. I asked the reason of this fellah's behaviour to his fellow-villager from some men who were looking on in a most nonchalant way. "Oh," they replied, "that's his brother, who beats him to make the soldiers believe that he has no share in refusing to pay the tax." It struck me as a curious way of showing brotherly affection.

The houses of the fellaheen are generally miserable huts, dark, dirty, and comfortless; in the mountains they are built of stone, or mud and stone combined, and generally roofed with bits of rough timber on which bushes and a couple of feet of soil are laid. These roofs require careful rolling at the beginning of the rains; if this is not done the water sinks in and causes them to collapse. Inside the house there is no furniture beyond a few rush mats, or if the man be well off, a carpet and some *lehafs* (cotton quilts). A very limited number of pots, pans, and jars serve for cooking. They seldom eat meat except at the 'Ayd el Kebír (great feast), or when an animal has to be killed to prevent its dying a natural death. The bread is generally made of millet or barley, rarely of wheat; this, with milk in the forms of *leben* (sour milk), *semn* (clarified butter), and cheese, and eggs, form the chief part of their food. In the poorer districts wild mallows (*khobbayzeh*) and other herbs form an important item.

III.

'Ain Sinia, *May* 18, 1872.

Being lately in Jerusalem for a few days, I took advantage of an offer of Dr. Chaplin to go with him and examine what seemed to be the remains of two Christian churches in the present Jewish quarter of that town. It appears probable that the Jews were once located near the Bab Hatta, *i.e.*, north-west of the church of St. Anne, for several of them own houses there, and have lately taken to live in them.

The first house we visited is near one of the Sephardim synagogues, and belongs to a Jew from Fas in Morocco. In an upper room, divided into two by a wooden platform—as is the common custom here amongst the Jews, who are fearfully overcrowded—we found two semicircular recesses, evidently apses, now used as cupboards. They faced due east, and measured across about seven and a half and five feet respectively. In some of the lower parts of the house are traces of an older masonry, upon and into which the present dwelling has been fitted.

The second house visited stands in the Maydan, about west-south-west of Robinson's Arch on the brow of the hill. The substructions consist of long vaults with slightly pointed roofs of rubble grouted in. Above these seems to have been a large chamber, the vaults springing

from corbels like the enclosed sketch : of these, one is pretty perfect, and another is half-concealed under plaster beside the entrance door, on the lintel of which is a roughly cut inscription, seemingly in Latin; it has been carefully obliterated, and nothing can now be made out but 8. NOV. at the end. In the basement of the house are several pieces of masonry which, judging from the dressing of the stones, are of Crusading date. In the house to the north of this is a doorway, with circular arch and plain mouldings. This is now blocked up, and not at all visible from the north side, which is in a house occupied by a Moslem. A stone coffin is said to be buried at the door of the Jew's house in which this arch is to be seen. Here, too, is a well of brackish water, similar in taste to that of Siloam, and 33 feet deep, which the owners declare to be a never-failing spring. In the house next below, the water comes from a cistern, and is pure and sweet. The Jews have a tradition, which is doubtless true, that both the places I have mentioned above were convents.

The mosque belonging to the Mowlevi Darwishes, which stands a little east of the entrance to the Royal caverns, must also have been a Christian church. I presume that the plan of this has been already made; if not, I will forward it to you on the first opportunity.

There are also some very interesting arches running north and south through the back of the shops on the east side of the principal Jewish street. These arches are round and built of very large stones, with little, if any, cement; the style of masonry appears exactly similar to that used in the fine Christian church at Amwas. Should these not yet have been described, I will examine them with greater care on my next visit to Jerusalem.

The country that we are now in abounds in olives, figs, and vines, to an extent that the ordinary traveller passing along the beaten tracks has no idea of. The valleys are almost precipitous, but terraced from top to bottom; low walls are built on the edges of the steps formed by the strata, to prevent the earth being washed down. These terraces are called by the natives *Ahbâl* or Ropes, and render cross-country work always difficult, and in many cases impossible. Corn, barley, and lentils are here grown, as well as *Kursenni*, which may be called horse-lentils, being only used to feed cattle.

Between this place and our last camp—Khirbeth ibn Háritu—I noticed that a considerable tract of the hills is thickly sprinkled with gnarled and stunted specimens of a species of pine called in Arabic *Sinobar*. This tree seems formerly to have extended south of Jerusalem, but two or three isolated examples close to the town are now all that remain. In the Lebanon it grows to upwards of 30ft. in height, especially on the out-crops of sandstone which occur east of Beyrout. A species of hawthorn, too, is found here, which I first noticed in North Syria and the district of Aleppo, bearing a fruit the size of a large morella cherry, and of a rather pleasant subacid flavour. It is both eaten raw and made into preserves and pickles.

My time has lately been so fully occupied with out-of-door work that I have found but little leisure to study topographical questions; but the list of towns assigned to the tribe of Ephraim, in whose territory we now are, being lost, few identifications can be looked for except maybe of certain places incidentally mentioned. Several of the names are highly suggestive of old Hebrew ones, but as Dr. Robinson most justly observes, we must expect to find many names repeated, as is the case in the modern nomenclature not only here but also in Europe.

There is a crusading fort about a mile from this place, called Burj Bardawíl, "Baldwin's Tower," evidently built to command the road between Jerusalem and Náblus. The construction is strong, but rude and inartistic. I shall send you a plan as soon as it is made. Some four years ago a small civil war occurred between half Yabrud, half Selwad, half 'Ain Abrúd, and 'Ain Sinia, against the other halves of the three first-named villages. This fort was occupied by each party in turn, and about 110 men were killed. The *finale* was as usual, the Government came down and conscripted many of the survivors, imposed heavy fines, and half-ruined the people, since which time they have been outwardly quiet and well-behaved, with the exception of a few cases of murder and robbery.

IV.

'Ain Sinia, *May* 27, 1872.

Excavated tombs are to be found throughout the whole of Palestine. In many cases they are scattered singly about the hills, as though some individuals preferred having their tombs in their own vineyards (*e.g.*, Nicodemus's tomb in his garden). In other places they form a regular cemetery. Over one of the tombs in this neighbourhood I found a Hebrew inscription, which is plainly legible, but having been cut on a very rough surface, I found it impossible to take a good squeeze of it.

The interior of the cave is unfinished, and on the north side is a rude kind of alcove or *mastabah*, on which a body was laid. This tomb had been entered by the fellaheen some time ago in hopes of finding treasure, but they were rewarded by nothing but a few osteophagi, which they broke up. I enclose a sketch showing the chief characteristics of these, which are of a harder stone than those found near Jerusalem. I also met with fragments of very thin, hard glass, broken pottery—originally large jars, with ribs running round at regular intervals—and one small long-necked jar (broken) of good red ware. The bones were in a very decayed state. I succeeded, however, in securing some fragments of skulls sufficiently typical. In the centre of the cave lay a skeleton in good preservation, but from its position comparatively modern. In the skull I found three olive stones. Now at Palmyra Captain Burton found peach, apricot, and olive stones in the skulls of mummies, and at Shakka in the Jebel el Druze, Haurán, we found an almond with the

top cut off diagonally in one of the mummy skulls from the Tower of Bassus. It is very puzzling to find this superstitious observance—whatever its import may be—adhered to in the case of a burial which to all appearance cannot well be earlier than the thirteenth or fourteenth century. In this case, however, it has occurred to me as possible, though not probable, that the olive stones in question were carried there by mice, and left by them after they had eaten the berry.

I opened another tomb close by the above-mentioned, and though to all appearance it had not been recently disturbed, it proved to have been pillaged. I found nothing in it but bones much decayed, and fragments of glass and pottery similar to those in the other cave. Near the door (which in both cases was the usual block of stone fitting into the square entrance) I found an ivory comb, fragments of charcoal, and part of the bottom of a glass, with either cut or moulded faces; owing to the oxydisation it is impossible to say which.

The crusaders must have had quite a colony in this district. Burj Bardawíl (Baldwin's Tower), a little north of Yabrud, commands the junction of several wadies, and the highway from Jerusalem to Náblus. Near this village is a ruin called Khirbet Satti, which tradition makes the stables of the above-mentioned fort. At Jifneh, near the modern Latin monastery, there is a ruined tower, and traces of other buildings which must be ascribed to the same period. At Arnútieh, too, they seem to have had a fort commanding the Náblus highway and the old Roman road leading to Antipatris, *viâ* Tibneh. This colony would have been connected with Jerusalem by the important posts of Beitin (Bethel), Bireh (Beeroth), and Nebi Samwíl.

The ruined khans at Miskah and El Burayj in the wady between Beit 'Anan and Beit Nuba, must be referred to the same date.

I have noticed one prevailing characteristic in all these, viz., the use of drafted stones, sometimes with two bosses, at the corners of the buildings, and nowhere else. Vaults with very slightly pointed arches are extensively used, and are solidly built with rough stones, and a large quantity of good cement. The faces of the ashlar being left rough, no masons' marks have been found as on the smooth-dressed stones at Nebi Samwíl, Kawkat el Hawa (Belvoir), &c.

The piece of difficult country near this place, in the middle of which is the spring aptly enough termed 'Ain el Haramíyeh, the Thieves' Fountain, seems always to have been regarded as the key of the road between Jerusalem and Náblus, for on the hill opposite to Burj Bardawíl, and east of 'Ain el Haramíyeh, I found the ruins of an important fort, Burj el Lisáneh (the Tower of the Tongue, probably so called from the spur which it occupies). The situation is most commanding, being, with the exception of Tell 'Asúr, which rises to some 3,100ft., the most elevated hill-top in this region. The ascent is by a difficult goat track from near Selwad, or the round-about road from Mezra'a el Sherkíyeh. From the north and west it is almost inaccessible, there being about halfway down the hill one of those precipices of smooth

rock, some 20ft. to 30ft. high, which are so common in this neighbourhood. The summit is nearly circular, and on it are many ruined walls built with massive cubes of rough-hewn stones, a few well-dressed drafted examples of considerable size being found at intervals. I remarked many unusually large excavated cisterns, but of the common bell shape. In the centre of the ruins is an oblong building, some 40ft. by 20ft. It was originally covered in by a round arched vault of masonry. The doorway, which is at the east-north-east end, is composed of large carefully-dressed drafted stones. The entrance is only about 5ft. by 3ft., and inside are three sockets for bars, and a circular hole above either to receive an upright bar, which would prevent the door from being fully opened, or to attack the besiegers through in case the door was forced.

Though the building has all the appearance of Roman work, it still seems to have been built of old materials, as in one or two places I noticed stones with rustic bosses, the rest being rough-dressed. Some fifty yards to the north-west I found six prostrate limestone columns, 7ft. 6in. high, and 1ft. 6in. in diameter, the only ornamentation being a double fillet at top and bottom, but broader at the latter. Though the stones have mostly been cleared away to make room for vines, still two or three pedestals remained *in situ*, and I could trace the general plan of the building, which ran nearly north and south. It must have consisted of three rows of arches supported at the sides by pilasters, and down the centre by two rows of three or more columns, as I observed a similar pillar at a little distance.

The present Christian population at Jifneh, Bir el Zeit, 'Abúd, 'Ain-'Arík, Ram Allah, Jania, and Tayibeh, is probably due to the fact of a strong crusading centre having existed in their midst. Most of these Christians are Greek orthodox, but in places, as at Ram Allah, Jifneh, and Bir el Zeit, where the Latins have established monasteries and churches, about one-fourth to one-third of the population adopt their ritual, purely as a matter of policy, for of dogmas or tenets they are quite unconscious.

The Christian party in Palestine is so small that, as they have often told me themselves, without the helping hand of consuls and convents they would be pushed to the wall.

I have no intention of here discussing the general effect of European missionary influence, whether lay or ecclesiastical, in Palestine; but I may mention one fact which militates strongly against the spread of Protestantism, and which seems to have been universally overlooked or ignored. I refer to the necessity of native clergy, or at all events of an Arabic-speaking ordained minister, in every place where it is intended to establish a Protestant community. A Bible-reader may be a most excellent individual, but that he should conduct a religious service is not at all agreeable to the ideas of Oriental Christians. A native priest, it is true, can seldom boast of much more learning than his flock, except that he can probably read and write a little, but still he is looked up to

as an ordained minister, and assumes a position which no layman can ever occupy. Till each community of Protestants has its own ordained minister, little progress will be made except in the matter of schools, by which, after all, more real and lasting benefit is conferred on the people, if the teaching be adapted to their requirements, than can be secured by any amount of adult diverts. In any case little visible advancement can scarcely be hoped for in less than two or three generations, so great and radical is the change which must be brought about. At a future period I hope to give a full account of the social, political, and religious aspects of this country in the year of grace 1872, which, however, would be out of place in these sketches of our survey.

These South Palestine Christians have, on the whole, though turbulent and unquiet, left a better impression on my mind than their North-country brethren. They seem more courageous, and probably their willingness to defend themselves prevented the Syrian massacre from extending into the South, for numerically they are but a handful in the centre of a lawless Moslem population.

A petulancy of temper shown by one of these gentlemen of Ram Allah, some two months ago, in pointing a pistol at Corporal Armstrong, who had expressed a decided objection to having a ruler and other articles taken out of his pocket, must be looked upon merely as a fretful dumb-show declaration of the universal idea in this land that might is right. On seeing that might (in the shape of myself and a Zabtiyeh) belonged to the other side, the fellah at once apologised by exclaiming that he was a Christian, and bolting precipitately down the terraces of a steep hill-side, whence he was not recovered till I had raised a hue and cry in his village and chased him for some distance over the vineyards. In the evening, acting purely on his old principle about *le droit de force*, he and all his friends came over to our camp at El Jib to beg pardon, and readily, but with a somewhat wry face, agreed to pay a small fine to the Protestant school in their village. This was, I well knew, a refined punishment, for a fellah would as soon have a tooth drawn as pay a dollar, but the length of the fang is doubled when it has to be paid to one of another sect.

With regard to identification of sites I may say that there is a village (Bet'ain) two and a quarter miles north-west of Nether Beth-horon, and three and three-quarters from the Upper. This may perhaps be that Baalath which is twice mentioned in that neighbourhood, viz., 1 Kings ix. 18 and 2 Chron. viii. 6.

In Joshua xxi. 22 Kibzaim is mentioned also in connection with Beth-horon: the modern Deir Ibziyeh, which is two and a quarter miles north of Beit 'Ur el Foka, may perhaps represent it. The location, however, of these obscure places can never be more than conjectural.

I have lately come across a book on Palestine ("Das heilige Land," &c., by Rabbi Schwartz, Frankfort-on-the-Maine, S. Kaufmann, 1852) by a Jerusalem rabbi, which is somewhat valuable as giving the geography from a Hebrew point of view, with many Talmudic and rabbinical references. One rendering is quite new to me, and as I am

not at this moment prepared to criticise it, I give it in his own words: "Atroth Beth Joab עטרות בית יואב" (1 Chron. ii. 54, A.V., Ataroth the house of Joab) ". . . . now the village Al Etron, which is vulgarly corrupted into Latrún. This is Atroth: a quarter of an hour to the north lies Beth Joab, *i.e.* Deir Ayyub." This rendering is ingenious, but I am not disposed to lean too much on the learned rabbi's authority on finding that he identifies the Upper Beth-horon with Huwára (the chalky), a village at the south-east corner of the Jebel Náblus block. Again, we find the Hebrew Ataroth preserved in the name 'Atára, north-west of this place, and, as I have before remarked, the fellaheen always speak of Latrun as *Ratlún*, which is also opposed to the rabbi's argument.

P. S. KUZAH, *June 5th*, 1872.

On the 29th ult. we moved our camp to this place. It is a small village lying about two hours south of Náblus. For the first time we are badly off for water, for with the exception of one or two cisterns, replete with animalculæ, the only supply is from 'Ain Kúzah, a well about a mile distant, and upon which the towns of Huwára and Bayta depend, as well as this village, and at times 'Ain 'Abús. The country is not quite so bad to travel over as that we have just quitted, but still

> "These high wild hills and rough uneven ways,
> Draw out our miles and make them wearisome."

The summer, too, has now fairly set in, and we may look for a cloudless sky during the next five months. On the hills, however, we generally get a cool sea breeze after 10 a.m., unless it happens to blow from the southwards, then it becomes a *khammasín*, or sirocco. The alternations of temperature by day and night are still great. During the day of the 29th ult. the thermometer stood at a little over 96° in the Observatory, and on the same night was 54° in the same place; this, however, is exceptionally great; 75° and 55° would be much nearer the general average, though yesterday, on coming back to camp at 2.30 p.m., I found the dry bulb 96°, wet bulb 67°, in the Observatory, and the black bulb in vacuo 165° in the sun. To-day at 12.30 they were respectively 100°·5, 66°·2, and 165°, while the minimum ground thermometer, which had been left in the sun unsuspicious of harm, was found to have burst. This heat justifies the pithy though somewhat vulgar expression a fellah used to me, "A gate of hell is open to-day."

C. F. TYRRWHITT DRAKE.

The following report of the progress of the Survey has also been received by the Committee, through Mr. Drake:—

CAMP, YAZUR, 17*th April*, 1872.

SIR,—During February and March 100 square miles of country were triangulated and detail filled in, which, with that already returned in January, makes a total of 180 square miles.

The detail filled in during the last two months was close—more especially that done in March.

With a trifling exception the whole has been drawn on the fair plan, but it has not been hill-shaded. A complete connection has now been established between Jaffa and Jerusalem, many trigonometrical observations having been made to the principal objects in the latter, so that the 1-2500 scale plan formerly made can be reduced at any convenient time and inserted in its relative position on the one-inch map.

Connections with Captain Wilson's bench marks, on the line of levelling from the Mediterranean to the Dead Sea, have been made in three instances with trigonometrical stations.

I am, Sir, your obedient servant,

THOMAS BLACK, Sergeant R.E.

C. F. T. DRAKE, Esq.

NOTE.—About 40 square miles have been already filled in this month.

ON THE METEOROLOGICAL OBSERVATIONS TAKEN AT NAZARETH, GAZA, BEYROUT, AND OTHER PLACES IN SYRIA.

BY JAMES GLAISHER, ESQ., F.R.S.

IN the accompanying tables, the same arrangement has been followed as in those given in previous reductions at these places, and which is described on pp. 103—105, *Quarterly Statement* No. III, 1869. The observations on which the tables are based are as follows:—Nazareth, 1869 October to 1871 March; Beyrout, from 1870 February to 1871 April, and 1870 October to 1871 April; Gaza from 1869 October to February; Jaffa, from 1869 November to 1870 February (no observations, however, taken during 1870 December); and at Ramleh, Beyt Nuba, and El Jib, for short periods during 1871 December—1872 March. At Nazareth no barometric observations were taken, and both at this place and at Beyrout the observer at times was compelled to cease observing, owing to the exigencies of the public service. With regard to the last three places above mentioned, the results are deduced for the period during which the camp was at each place; at Ramleh, however, the observations during 1871 December are divided into two groups, owing to the camp having been blown down on the 13th. The first of these groups, therefore, refers to observations taken at the camp, 230 feet above sea level, and the second to those taken at the Russian Hospice, 270 feet above the sea.

ATMOSPHERIC PRESSURE.

Gaza.—The highest reading of the barometer was 30·630in. in Nov. 1869, and the lowest 29·348in. in March 1870. The monthly range of reading was small, and varied from about six-tenths of an inch in the winter months, to little less than two-tenths of an inch in the summer

months. The mean monthly values are also smaller in summer than in winter, and varied from 30·157in. and 30·171in. in October and November 1869, to 29·521in. and 29·547in. in July and August 1870.

Beyrout.—The highest reading was 30·230in. in February 1871, and the least 29·277in. in March 1870. The range is greater than at Gaza, but not to any extent.

Jaffa.—The readings show but very small variations in the three months, the ranges being small, and the mean values 28·8in. nearly in each instance.

TEMPERATURE.

Highest Temperatures by day.—At Nazareth, 99°·1 was recorded in October 1869. The two succeeding months in the year show a rapid decrease in temperature, the values being 89°·8 and 85°·8 respectively, while in the same months in 1870, 83°·0 and 72°·0 were registered. The value in January 1870 was 78°·9. In February, March, and April, 1870, the highest temperatures were all less than 90°, but in May a sudden increase to 104° occurred, followed by a decrease to 92½° in June, which was again followed by an increase to 101° in July. The values for the next two months were both in excess of 90°, and those for October and November above 80°, but for December 1870 and January 1871 they were 72°·0 and 67°·6 respectively.

At Gaza, instead of a uniform decrease in the four months ending January 1870, there was a higher temperature (93°·0) in November 1869 than in the other months, and the lowest (83½°) occurred in December. Increasing temperatures were then recorded, and the maximum for 1870 (107°·5) was reached in May. In June, a decrease to 88°·0 occurred, followed by an increase to 93° in August, but afterwards the values generally decreased to 79°·0 in January 1871.

At Beyrout the highest temperature was 81°·0 in March 1870, and the lowest 67°·0 in February 1871 (it is to be noted that there were no observations at this place from May to September 1870); while at Jaffa the highest was 85°·0 in November 1869, and the lowest 78°·0 in January 1870.

Thus for the whole period the maximum occurred in May 1870, and was 107°·5 at Gaza, and 104°·4 at Nazareth (unfortunately there were no observations at Beyrout during this month).

Lowest Temperatures at night.—At Nazareth in October 1869 the minimum was 55°·5; the values then decreased to 36°·5 in February 1870; but in March, 39°·6 was recorded, and 35°·8 in April. The temperatures then increased to 64°·4 in August, followed by a decrease to 33°·0 in February 1871.

At Gaza, in 1870, the minimum (39°·0) occurred in February and April, and 36°·0 was registered in February 1871. In June, July, and August, 1870, the values were all in excess of 60°·0, in September and October above 50°, and in November and December of the same year, between 40° and 50°.

At Beyrout, 46°·0 and 45°·0 were recorded in February and April 1870, and 43°·0 in February 1871. At Jaffa, in January and February 1870, the lowest values were 36°·0 and 35° respectively.

Thus for the whole period the minimum occurred in February 1871 and was 36°·0 at Gaza, 43°·0 at Beyrout, 33°·0 at Nazareth, and 35°·0 at Jaffa.

Monthly Range of Temperature.—At Nazareth the range was between 40° and 50° in each month, from 1869 October to 1870 March, with the exception of January 1870, when it was but 36°. In April and May it was 49°·6 and 51°·6 respectively; but from June to November of the same year less than 40°. In 1870 December and 1871 January respectively, it was as small as 25°·7 and 28°·7, increasing again to 40° in February and March of the same year.

At Gaza the ranges varied (from October 1869 to February 1870) between 31°·0 and 49°·0. In April the range was 62°·0, and in May 56°·0. From June to the end of the year the variations were but small, and averaged about 33°. At Beyrout much smaller ranges were experienced than at the two above-mentioned places, in the four winter months ending 1871 the average value being but 15°.

Mean Temperature.—At Nazareth the coldest month in 1870 was January, with a mean temperature of 56°·6; and in 1871, February, with 51°·5. April 1870 was 1°·8 colder than March of the same year, but the means for the next two months (May and June) were nearly 80°, and those for July and August slightly in excess of that value. Those for September 1870 to January 1871 varied from 76°·9 in the former month to 55°·4 in the latter. At Gaza the coldest month was February in both 1870 and 1871, the mean values being 58°·3 and 55°·4 respectively. The means show a gradual decrease from October 1869 to February 1870; then, with the exception of April and June 1870, they increase to 80°·9 in August, which was the absolute maximum for 1870. From September 1870 to February 1871 a rapid decrease occurred. At Beyrout and Jaffa also the coldest month was February 1871, with mean temperatures of 54°·8 and 59°·6 respectively.

DIRECTION OF THE WIND.

At Nazareth the north wind averaged about eight days in the months May to October 1870, and varied from two to seven days in the remainder, while at Gaza its least prevalence was five days in April 1870, and from May 1870 to February 1871 it averaged fifteen days. The winter months of 1870—1 show a much greater prevalence of this wind than those of 1869—70. At Beyrout its general continuance was but small in December 1870, but one day only.

The east wind shows its greatest continuance at Nazareth during the winter months. In November 1870 it lasted eighteen days. No air blew from this quarter in August 1870, and for only one day in July and two days in September of the same year. At Gaza its prevalence was remarkably small throughout the whole period: in February 1870

it continued for six days; but in June it was entirely absent, and generally in the remaining months it averaged but one or two days. At Beyrout likewise its continuance was but small.

At Nazareth, south directions were less in their prevalence than either of the others. The general average was about four days, but less in the summer and more in the winter months. At Gaza the last two months of 1869, and the first five of 1870, were remarkable for the undue prevalence of this wind; in December 1869 it continued for twenty days, and from ten to fifteen days in each of the others. From June 1870 to February 1871 its continuance was very small, being entirely absent in July, and averaging but three days for the remainder. At Beyrout the general average was about eleven days. The west wind shows its greatest continuance at Nazareth during the summer months, averaging about sixteen days. In February and November 1870 it prevailed but for four days. It was less prevalent at Gaza, but shows the same excess in the summer, but averaging about thirteen days. At Beyrout its continuance was smaller still. At this place likewise calm days prevailed greatly at times, in December 1870 for thirteen days, and in April 1871 for ten days.

RAINFALL.

Number of Days.—At Nazareth the rainless months were May to September 1870. It fell on eleven and twelve days respectively in December 1869 and January 1870, followed by only three days in February, and then again by ten and thirteen in March and April. From November 1870 to March 1871 an increase is shown from two days in the former to seventeen days in the latter month.

At Gaza no rain fell in October 1869, and in February, May, June, July, August, September, and November, 1870. In the remaining months in the latter part of 1869 and early part of 1870, it averaged about four days, but from December 1870 to February 1870 its prevalence was greater; in the latter month falling on twelve days.

Beyrout shows a greater number of days, in the spring months varying from twelve to nineteen. At Jaffa it rained on very few days.

Amount Collected.—The rainless months at each station have been given above. At Nazareth the greatest fall from October 1869 to April 1870 was 4·41in. in March, and the least 0·07in. in October; the remaining months averaging about two inches. 0·38in. fell in November 1870, and 1·61in., 3·03in., 5·30in., and 8·03in. respectively in December 1870 and January, February, and March, 1871.

The greatest fall at Gaza was 3·12in. in February 1871; the nearest to this being 2·48in. in April 1870, 2·47in. in December 1869, and 2·38in. in October 1870.

The falls at Beyrout were much heavier, and averaged from 11·20in. in March 1871 to 0·59in. in February 1870. In February 1871 7·93in. fell, and 6·76in. in April, 1870. The greatest fall at Jaffa was 4·10in. in January 1870, and the least 0·05in. in February of the same year.

NAME OF STATION AND OBSERVER.	Year and Month.	Height above Sea-level.	BAROMETER.				TEMPERATURE OF AIR IN MONTH.						Approximate Mean Temperature from Max. and Min.	MEAN TEMPERATURE OF			VAPOUR.			Mean Degree of Humidity, Saturation=100.	Mean Weight of a Cubic Foot of Air.	WIND.					RAIN.	
										Mean								In a Cubic Foot of Air.				Estimated Strength.	Relative Proportion of				Number of Days it fell.	Amount Collected.
			Highest.	Lowest.	Range in Month.	Mean reduced to 32° Fahr.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.		Air.	Evaporation.	Dew-point.	Elastic Force.	Mean.	Short of Saturation				N.	E.	S.	W.		
	1869	feet	in.	in.	in.	in.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	in.	grs.	grs.	deg.	grs.							
	Oct.		30·250	29·995	0·255	30·157	86·0	55·0	31·0	82·2	62·3	19·9	72·3	73·0	70·5	68·9	·701	7·6	1·2	87	521	0·5	13	2	7	9	0	0·00
	Nov.		30·630	30·000	0·630	30·171	93·0	49·0	44·0	76·0	56·8	19·2	66·4	66·0	63·4	61·3	·543	6·0	1·0	85	530	0·7	11	1	10	8	5	1·66
	Dec.		30·104	29·629	0·475	29·937	83·5	45·0	38·5	70·6	50·9	19·7	60·8	60·2	57·3	54·7	·429	4·8	1·1	83	550	0·9	5	2	20	4	5	2·47
	1870																											
	Jan.		30·098	29·646	0·452	29·868	86·0	44·0	42·0	69·2	50·9	18·3	60·0	59·8	57·4	55·4	·438	4·8	0·7	85	549	0·9	7	3	15	6	3	0·43
	Feb.		30·042	29·607	0·435	29·866	88·0	39·0	49·0	68·0	47·7	20·3	57·8	58·3	55·8	53·5	·411	4·5	0·9	84	551	0·7	8	6	10	4	0	0·00
	Mar.		29·844	29·348	0·496	29·653	95·0	47·5	47·5	73·3	54·8	18·5	64·0	64·5	61·2	58·5	·491	5·4	1·3	81	522	1·3	9	2	12	8	3	1·40
	April		30·049	29·517	0·532	29·802	101·0	39·0	62·0	72·3	52·6	19·7	62·4	62·2	61·3	60·2	·528	5·9	0·4	95	527	2·0	5	4	11	10	5	2·48
Gaza, Syria.	May	?	29·947	29·569	0·376	29·705	107·5	51·5	56·0	89·9	63·2	26·7	76·6	78·1	71·8	67·4	·672	7·2	3·2	70	509	0·3	11	5	5	10	0	0·00
J. Nimmo, Esq.	June		29·767	29·513	0·254	29·641	88·0	62·0	26·0	83·8	68·8	15·0	76·3	77·1	74·8	73·2	·818	8·8	1·3	87	508	0·3	15	0	1	14	0	0·00
	July		29·612	29·438	0·174	29·521	92·0	67·5	24·5	88·4	73·5	14·9	81·0	80·7	75·6	72·1	·790	8·5	2·7	75	503	0·5	12	1	0	18	0	0·00
	Aug.		29·728	29·433	0·295	29·547	93·0	66·0	27·0	90·0	70·2	19·8	80·1	80·9	77·7	75·5	·884	9·5	1·7	83	503	0·4	13	1	1	16	0	0·00
	Sept.		29·850	29·474	0·376	29·691	91·0	58·5	32·5	87·8	67·4	20·4	77·6	78·3	75·2	73·0	·814	8·7	1·7	83	508	0·2	18	1	5	6	0	0·00
	Oct.		29·854	29·591	0·263	29·771	86·5	55·0	31·5	82·3	60·7	21·6	71·5	71·9	69·6	67·8	·682	7·4	1·1	88	516	0·4	20	1	3	7	3	2·38
	Nov.		30·025	29·638	0·387	29·838	92·0	49·5	42·5	81·9	56·1	26·8	68·5	67·6	65·0	62·9	·575	6·3	1·1	84	522	0·3	15	2	1	12	0	0·00
	Dec.		29 997	29·583	0·414	29·828	82·0	46·5	35·5	73·1	51·3	21·8	62·2	61·5	58·9	56·7	·460	5·1	1·0	84	529	0·5	10	1	2	18	7	1·91
	1871																											
	Jan.		30·044	29·637	0·407	29·827	79·0	41·5	37·5	70·2	48·6	21·6	59·9	58·9	55·7	52·8	·401	4·4	1·2	80	532	0·8	18	4	1	8	6	2·09
	Feb.		30·135	29·597	0·538	29·848	80·5	36·0	44·5	66·1	44·9	21·2	55·5	55·4	53·2	51·1	·377	4·3	0·7	86	536	0·6	18	3	1	6	12	3·12

NOTE.—The observations were taken at 9 a.m. and 9 p.m.

BAROMETER.—The highest reading was 30·630in. in November 1869; the lowest 29·348in. in March 1870. The greatest monthly range was 0·630in. in November 1869, and the least 0·174in. in July 1870. The mean values are higher in the winter than in the summer months, and ranged from 30·171in. in November 1869 to 29·521in. in July 1870.

TEMPERATURE.—The highest temperature by day ranged from 107°·5 in May 1870 to 79°·0 in January 1871; and the lowest temperature at night from 67°·5 in July 1870 to 36°·0 in February 1871. The extreme ranges of temperature were 62°·0 in April 1870 and 24°·5 in July 1870. The highest mean temperature was 80°·9 in August 1870, and the lowest 55°·4 in February 1871.

WIND.—The north wind was the most prevalent, and with but few exceptions predominated above the others in each month; in October 1870 it prevailed for 20 days.

RAIN.—No rain fell in October 1869, February, May, June, July, August, September, and November 1871; in February 1871 it fell on 12 days to the amount of 3·12in.

NAME OF STATION AND OBSERVER.	Year and Month.	Height above Sea-level.	BAROMETER.				TEMPERATURE OF AIR IN MONTH.						Approximate Mean Temperature from Max. and Min.	MEAN TEMPERATURE OF			VAPOUR.			Mean Degree of Humidity, Saturation=100.	Mean Weight of a Cubic Foot of Air.	WIND.							RAIN.	
										Mean.								In a cubic foot of air.				Estimated Strength.	Relative Proportion of						Number of Days it fell.	Amount Collected.
			Highest.	Lowest.	Range in Month.	Mean reduced to 32° Fahr.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.		Air.	Evaporation.	Dew-point.	Elastic Force.	Mean.	Short of Saturation.				N.	E.	S.	W.	Calm.			
Jaffa, Syria.*	1869	feet.	in.	in.	in.	in.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	in.	grs.	grs.		grs.								in.
H. A. Kayat, Esq.	Nov.	..	28·893	28·618	0·275	28·762	85·0	50·0	35·0	78·5	56·9	21·6	67·8	70·1	64·6	60·4	·526	5·7	2·3	71	501	..	9	..	..	..	..	1	0·20
Lat. 32° 3′ N.	1870																												
Lon. 34° 44′ E.	Jan.	200	29·028	28·492	0·536	28·819	78·0	36·0	42·0	69·1	49·4	19·7	59·3	60·7	55·9	51·8	·385	4·3	1·6	72	512	0·2	6	6	12	7	..	4	4·10
	Feb.	..	28·965	28·526	0·439	28·812	81·0	35·0	46·0	68·5	45·3	23·2	56·9	59·6	53·6	48·3	·339	3·8	1·9	67	513	..	..	..	..	..	..	1	0·05
The Camp, Ramleh,†	1871																												
Syria.	Dec.	230	29·913	29·664	0·249	29·811	84·1	52·0	32·1	75·8	..	..	65·0	65·7	58·9	53·3	·408	4·0	2·4	56	525							2	0·65
Russian Hospice,	1872																					1·5	2	6	12	4	7		
Ramleh.	Jan.	270	29·985	29·555	0·430	29·797	68·0	47·4	20·6	62·2	52·2	10·0	57·2	56·1	53·2	50·5	·369	4·1	0·9	82	534							11	4·23
Lat. 31° 55′ N.			29·991	29·559	0·432	29·760	71·2	46·0	25·2	62·8	45·1	13·7	56·0	53·5	49·9	46·4	·316	3·5	1·1	77	537	0·8	0	11	10	0	10	7	5·57
Long. 34° 52′ E.																													
Bayt Nuba, Syria.‡	1872																												
Lat. 31° 51′ N.	Feb.	775	29·517	28·994	0·523	29·290	71·1	38·7	32·4	60.5	44·6	15·9	54·0	51·5	49·6	47·7	·332	3·7	0·6	87	530	0·6	0	2	14	4	9	16	4·03
Lon. 35° 2′ E.	Mar.	..	29·358	29·188	0·170	29·278	71·5	38·6	32·9	63·7	45·6	18·1	54·6	53·8	49·7	45·7	·306	3·5	1·2	74	528	..	..	..	..	..	..	1	0·15
El Jib, Syria.§	1872																												
Lat. 31° 51′ N.	Mar.	2540	27·577	27·157	0·420	27·389	74·3	39·0	35·3	63·4	46·2	17·2	54·8	52·6	46·1	39·6	·243	2·8	1·7	62	495	..	..	..	..	..	..	4	0·95
Lon. 35° 12′ E.																													

* 1869 November. The results are deduced from 18 days' observations.
December. No observations taken.
1870 February. The results are deduced from 20 days' observations.

† 1871 December. The results at the camp, Ramleh, are deduced from 12 days' observations, viz., December 1 to 12; on the 13th the camp was blown down; and from the 14th to the end of the month the observations were taken at the Russian Hospice.

‡ March. The results are deduced from observations on the first five days only.

§ The above values are deduced from 18 days' observations only, viz., 6th to 23rd.

NAME OF STATION AND OBSERVER.	Year and Month.	Height above Sea-level.	BAROMETER.				TEMPERATURE OF AIR IN MONTH.						Approximate Mean Temperature from Max. and Min.	MEAN TEMPERATURE OF			VAPOUR.			Mean Degree of Humidity, Saturation = 100.	Mean Weight of a Cubic Foot of Air.	WIND.								RAIN.	
										MEAN								In a Cubic Foot of Air.					Relative Proportion of								
			Highest.	Lowest.	Range in Month.	Mean reduced to 32° Fahr.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.		Air.	Evaporation.	Dew-point.	Elastic Force.	Mean.	Short of Saturation.			Estimated Strength.	N.	E.	S.	W.	Calm.	Number of Days it fell.	Amount Collected.
	1870		in.	in.	in.	in.	deg.	deg.	deg	deg.	deg	deg.	deg.	deg.	deg.	deg.	in.	grs.	grs.		grs.								
	Feb.	..	30·080	29·515	0·565	29·904	71·0	46·0	25·0	61·1	53·6	7·5	57·4	57·7	53·7	50·1	·362	4·0	1·3	76	535	1·1	6	3	9	4	6	4	0·59
	Mar.	..	29·875	29·277	0·598	29·651	81·0	48·5	32·5	77·2	59·1	18·1	68·6	66·3	63·5	61·5	·543	5·9	1·2	84	520	1·2	3	1	12	6	9	12	4·38
	April	..	30·121	29·428	0·693	29·786	80·0	45·0	35·0	65·2	56·6	9·2	60·6	60·9	57·7	54·9	·431	4·9	1·1	82	529	1·6	4	2	11	8	5	15	6·76
Beyrout, Syria.	Oct.	..	29·939	29·578	0·361	29·792	76·0	60·0	16·0	73·1	65·7	7·4	69·4	69·6	64·8	61·1	·536	5·9	2·0	75	520	..	..	..	..	..	..	4	2·96
S. Jackson Eldridge,	Nov.	..	30·143	29·733	0·410	29·926	74·0	60·0	14·0	70·9	63·2	7·7	67·1	67·3	62·4	58·5	·491	5·4	2·0	74	525	..	..	..	..	..	..	3	0·78
Esq., Consul-General	Dec.	..	30·057	29·514	0·543	29·908	69·0	53·0	16·0	65·1	57·8	7·3	61·4	61·4	58·0	55·1	·434	4·8	1·3	80	531	0·6	1	4	11	2	13	12	4·59
for Syria.	1871																													
Lat 33° 54′ N.	Jan.	160	30·143	29·679	0·464	29·893	68·0	51·5	16·5	62·4	54·7	7·7	58·5	58·4	54·5	51·0	·375	4·6	1·3	77	534	..	..	..	..	..	..	15	4·67
Lon. 35° 29′ E.	Feb.	..	30·230	29·610	0·620	29·951	67·0	43·0	24·0	58·0	50·6	7·4	54·3	54·8	51·0	47·4	·326	3·7	1·1	76	539	1·4	2	3	11	4	8	13	7·93
	Mar.	..	30·016	29·529	0·487	29·824	73·0	48·0	25·0	61·7	54·2	7·5	57·9	58·3	54·7	51·2	·381	4·3	1·2	78	532	..	..	..	..	..	..	19	11·20
	April	..	29·935	29·475	0·460	29·737	78·0	57·0	21·0	68·6	60·4	8·2	64·5	64·8	61·4	58·6	·494	5·4	1·4	81	524	1·0	5	4	4	7	10	5	1·30

NOTE.—From 1870, February to April, observations were taken at 9 a.m. and 10 p.m. ; from 1871, October to April, at 9 a.m. and 9. p.m.
,, October. The results are deduced from 19 days' observations only, viz., from the 12th to 30th.
,, November. The results are deduced from 28 days' observations, viz., from 3rd to 30th.
,, January. The results are deduced from 27 days' observations, viz., 1st and 2nd, and from 7th to 31st ; observer away on public service.
,, March 11th, no observations.

BAROMETER.—Highest reading, 30·230in. in February 1871 ; lowest reading, 29·277in. in March 1870 ; greatest monthly range, 0·693in. in April 1870 ; least, 0·361in. in October 1870. Highest mean value, 29·926in. in November 1870 ; least 29·651in. in March 1870.

TEMPERATURE.—The highest temperatures by day ranged from 81°·0 in March 1870, to 67°·0 in February 1871, and the lowest temperatures at night from 60°·0 in October and November 1870, to 43°·0 in February 1871. The extreme ranges of temperature were 35°·0 in April 1870, and 14°·0 in November 1870. The highest mean temperature was 69°·6 in October 1870, and the lowest 54°·8 in February 1871.

RAIN.—Greatest fall 11·20in. on 19 days in March 1871 ; least fall 0·59in. on 4 days in February 1870.

NAME OF STATION AND OBSERVER.	Year and Month.	Height above Sea-level.	BAROMETER.				TEMPERATURE OF AIR IN MONTH.							MEAN TEMPERATURE OF			VAPOUR.			Mean Degree of Humidity, Saturation=100.	Mean Weight of a Cubic Foot of Air.	WIND.					RAIN.	
										Mean.			Approximate Mean Temperature from Max. and Min.				Elastic Force.	In a Cubic Foot of Air.				Estimated Strength.	Relative Proportion of				Number of Days it fell.	Amount Collected.
			Highest.	Lowest.	Range in Month.	Mean reduced to 32° Fahr.	Highest.	Lowest.	Range.	Of all Highest.	Of all Lowest.	Daily Range.		Air.	Evaporation.	Dew-point.		Mean.	Short of Saturation.				N.	E.	S.	W.		
	1869.	feet.	in.	in.	in.	in.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	in.	grs.	grs.								in.
	Oct.	..	..	..	..	..	99·1	55·5	43·6	87·0	64·2	22·8	75·7	76·6	64·4	55·8	·446	4·9	5·0	48	..	1·1	7	6	2	9	2	0·07
	Nov.	..	..	..	..	..	89·8	48·2	41·6	71·4	55·9	15·5	63·6	64·5	57·4	51·5	·381	4·2	2·5	63	..	1·1	2	7	5	16	7	2·19
	Dec.	..	..	..	..	..	85·8	40·2	45·6	67·2	48·8	18·4	58·0	57·6	52·1	47·1	·324	3·7	1·7	68	..	1·9	7	16	4	4	11	2·96
	1870.																											
	Jan.	..	..	..	..	..	78·9	42·8	36·1	64·1	48·9	15·2	56·5	56·6	52·7	49·1	·349	4·0	1·2	76	..	2·0	4	14	5	8	12	2·90
	Feb.	..	..	..	..	..	85·3	36·5	48·8	66·4	45·9	20·5	56·1	56·8	51·3	46·2	·315	3·5	1·7	67	..	1·6	..	..	..	..	3	1·00
	Mar.	..	..	..	..	..	88·0	39·6	48·4	68·5	51·6	16·9	60·0	61·5	55·8	51·7	·372	4·2	1·9	69	..	1·5	..	..	..	..	10	4·41
Nazareth, Syria.	April.	..	..	..	..	..	86·0	35·8	50·2	67·4	48·3	19·1	57·8	59·7	50·4	42·2	·269	3·0	2·7	52	..	1·2	..	..	..	..	13	2·67
	May.	1000	..	..	..	..	104·4	54·8	49·6	89·6	65·7	23·9	77·7	79·5	68·2	60·4	·525	5·6	5·2	52	..	1·8	7	7	4	13	0	0·00
Dr. P. K. Vartan.	June.	..	..	..	..	..	92·5	61·0	31·5	89·1	63·9	25·2	76·5	78·5	67·2	59·4	·508	5·5	4·9	52	..	0·9	8	2	2	18	0	0·00
	July.	..	..	..	..	..	101·0	61·0	40·0	90·3	67·1	23·2	78·7	80·1	71·3	65·2	·624	6·7	4·4	60	..	1·0	7	1	3	19	0	0·00
	Aug.	..	..	..	..	..	94·4	64·4	30·0	88·5	68·0	20·5	78·2	80·5	71·4	65·2	·622	6·7	4·5	59	..	0·9	8	0	2	21	0	0·00
Lat. 32° 43′ N.	Sept.	..	..	..	..	..	96·8	59·6	37·2	85·5	65·5	20·0	75·5	76·9	69·4	64·1	·600	6·5	3·5	65	..	1·3	9	2	1	18	0	0·00
Long. 35°19′ E.	Oct.	..	..	..	..	..	87·0	52·0	35·0	78·4	60·7	17·7	69·5	69·8	62·0	55·9	·449	4·9	3·0	61	..	1·4	9	7	4	11	5	1·81
	Nov.	..	..	..	..	..	83·0	51·5	31·5	76·0	57·7	18·3	66·9	67·7	55·8	46·3	·315	3·5	4·0	46	..	1·9	3	18	5	4	2	0·38
	Dec.	..	..	..	..	..	72·0	46·3	25·7	65·8	52·0	13·8	58·9	58·8	52·7	47·3	·327	3·7	1·9	66	..	1·3	5	11	5	10	7	1·61
	1871.																											
	Jan.	..	..	..	..	..	67·6	38·9	28·7	62·6	47·9	14·7	55·2	55·4	49·6	44·1	·291	3·2	1·7	66	..	1·4	5	13	3	10	8	3·03
	Feb.	..	..	..	..	..	72·5	33·0	39·5	59·2	43·4	15·8	51·3	51·5	45·9	40·2	·249	2·8	1·5	66	..	1·3	4	10	6	8	12	5·30
	Mar.	..	..	..	..	..	81·0	40·0	41·0	62·7	48·1	14·6	55·4	54·8	51·9	49·1	·349	4·0	0·9	81	..	1·4	3	7	6	15	17	8·03

NOTE.—From 1869 October, to 1870 August, observations were taken at 9 a.m. and 3 p.m.; from 1870 September, to 1871 March, at 8.30 a.m. and 4 p.m.

„ 1869 October. The results are deduced from 24 days' observations only, viz., from 1st to 11th, and 19th to 31st.

„ 1870 February. Register of directions of the wind, incomplete.

„ „ March. The results are deduced from 29 days' observations.

„ „ April. The results are deduced from 28 days' observations.

TEMPERATURE.—The highest temperatures by day ranged from 104°·4 in May 1870, to 67°·6 in January 1871, and the lowest temperature at night from 64°·4 in August 1870, to 33°·0 in February 1871. The extreme ranges of temperature were 50°·2 in April 1870, and 25°·7 in December 1870. The highest mean temperature was 80°·5 in August 1870, and the lowest 51°·5 in February 1871.

RAINFALL.—In 1870, May, June, July, August, and September, no rain fell. The greatest fall was 8·03in. on 17 days in March 1872.

CHURCH OF THE KNIGHTS OF ST. JOHN.

Immediately to the south of the church of the Holy Sepulchre, and almost in the centre of Jerusalem, there has existed for more than 600 years an open plot of ground, upon which no buildings have been erected. This waste space, now known as the Muristan, was formerly covered by the spacious palace and hospital of the Knights of St. John, but until quite recently the only visible remains were a picturesque gateway, with figures representing the signs of the zodiac, and portions of a church and courtyard; the two latter so covered with foul refuse that few travellers ventured to give them more than a momentary glance.

In 1869, on the occasion of the visit of the Crown Prince of Prussia to the Holy Land, the Sultan made a grant of the eastern half of the Muristan to the Prussian Government, with permission to erect a church or rebuild that of the Knights of St. John. Excavations have since been actively carried on in this ground under the superintendence of Mr. Schick, who has kindly placed copies of the plans which he has made at the disposal of the Palestine Fund, and informed the Secretary of the result of his labours. The annexed plan shows the church of the Knights of St. John and the buildings immediately connected with it.

Nothing of very ancient date has yet been found, but additional excavations are to be made, and a new street is to be opened between David Street and the church of the Holy Sepulchre. During the execution of these works it is to be hoped that some interesting relics of the ancient city may be laid bare.

One of the most valuable of the results which may be expected from Mr. Schick's labours is the determination of the natural features of the ground in the vicinity of the Holy Sepulchre, which have been concealed from view for so many centuries. It is also possible that the excavations may settle the question of the site of the second wall of the ancient city.

An account of the hospital of the Knights of St John will be found in Murray's Handbook to Syria and Palestine, and Captain Warren has given a detailed description of his excavations in the Muristan in the "Recovery of Jerusalem."

REPORT OF ANNUAL GENERAL MEETING,

Held at the Royal Institution, 17th June, 1872,
His Grace the Archbishop of York in the chair.

The Chairman.—My lords, ladies, and gentlemen, I have to call upon the Reverend Mr. Holland to read the Report, and I must in

doing so express my regret that Mr. Grove, who has been to so great an extent the bone and sinew of this enterprise, has been detained by other business, and cannot be present with us to-day.

The Rev. F. W. HOLLAND read the Report of the Committee.

"The Report which we have to lay before you this year, although a brief one, will be found to be in most respects highly satisfactory, not only as a report of work already accomplished, but also as a pledge of work to be done hereafter.

It will be remembered that at our last Annual Meeting a resolution was passed to the effect that "the meeting hailed with satisfaction the resolution of the Committee to take immediate steps to complete the Survey of Palestine, and pledged itself to support them in this important work." We rejoice to be able to report that the Survey thus resolved upon has been satisfactorily commenced, and in active progress for the last six months.

The first step in this important work was to find an officer possessed of the necessary experience in surveying, together with the peculiar qualities for survey work in Palestine. Such an officer the Committee found in Captain R. W. Stewart, R.E., of the Ordnance Survey in England. And besides Captain Stewart, the Committee had the good fortune to obtain also the services of Mr. C. F. Tyrwhitt Drake, well known as the fellow-traveller of Professor Palmer during his adventurous journey through the Desert of the Tîh. Mr. Drake's services in the Survey will be of great value in his triple capacity of naturalist, archæologist, and Arabic scholar. His experience has been gathered not only from his journey with Professor Palmer, but also in explorations in Northern Syria, the Hauran, and the Anti-Lebanon with Captain Burton, and in Morocco.

The non-commissioned officers selected by Captain Stewart were Sergeant Black and Corporal Armstrong, of the Royal Engineers, both men known to himself, of tried intelligence and great experience. The choice of Captain Stewart has so far proved most fortunate, as the two men up to the present have shown themselves entirely worthy of the confidence placed in them.

The rest of the party is made up of servants hired on the spot. The non-commissioned officers left England in the autumn of last year, and were joined immediately on their arrival at Jaffa by Captain Stewart. After the preliminary unpacking and arranging had been accomplished, the firman granting permission to work was received in Jerusalem, and ground was broken near Ramleh by the careful measurement of a base line. Mr. Drake now joined the party. Most unfortunately, at this point the health of Captain Stewart broke down. After several weeks of severe suffering he was ordered to return at once to England, and came home in the hope that a short stay would enable him to go out again. In this hope he was disappointed, and found himself obliged, two months ago, to send in his resignation, which the Committee were compelled most unwillingly to accept.

Captain Stewart, who is present, will himself read a brief report of his work.

The Committee desire to express their deep sense of the loss to themselves, and the cause generally, from this unforeseen termination of Captain Stewart's engagement, and at the same time their sympathy with the disappointment he has suffered in thus having a work on which he had set his heart snatched from his hands.

It must not, however, be forgotten that the credit of the commencement, and the continuation, according to the directions he laid down himself, up to the present time, is due to Captain Stewart. And it speaks very highly for the careful maner in which the work was planned and started, that no interruption has been caused, the Survey having gone on as well, though not of course so rapidly, as if Captain Stewart were himself on the spot.

On his departure the command of the party was assumed by Mr. Drake, and the thanks of the Committee are due to that gentleman, not only for his ability in carrying on the work, but also for his readiness to assume the sole responsibility of the expedition. What that responsibility involves, travellers in the East can alone understand.

On the resignation of Captain Stewart, the Committee proceeded at once to apply to the War Office for an officer of Royal Engineers to take his place.

They are happy to report that a gentleman has been found, Lieutenant Claude Conder, who appears to be in every respect worthy to succeed the officers who have, before him, worked for the Fund. His arrangements are now entirely completed, and he starts for Palestine this very week. He is, unfortunately, prevented from being with us this day by the multifarious duties which his departure brings upon him.

The Hamath inscriptions, of which mention was made in the last Report, have been photographed and copied.

It is to be hoped that these curious inscriptions may ultimately be deciphered, and yield results of importance to the cause of Biblical investigation.

The work of exploration in Jerusalem has remained suspended since Captain Warren left the city, but the Committee have not forgotten that in Jerusalem lies the most important field of their labours, and that the results which will sooner or later be arrived at there will possess a wider and deeper interest than those obtained in other portions of the Holy Land.

They have found a gentleman whose capacity, attainments, and antecedents appear to fit him eminently for the post of explorer in the Holy City and its neighbourhood; and they trust shortly to be able to make a statement of the plan on which they propose during the next winter to prosecute the investigations so ably carried on by Captain Warren, into new and even more fruitful places.

The Committee have to deplore the loss of three distinguished members of their body. Sir Roderick Murchison, the late illustrious President of

the Royal Geographical Society, at all times took a warm interest in the work of the Fund. Dr. Alexander Keith Johnstone, in the foremost rank among English geographers, was always most active in promoting the interests of the Fund in Edinburgh, and from the commencement of our labours acted as honorary secretary to the Edinburgh Local Association. And, lastly, the Committee learn this morning, with the deepest regret, the death of Dr. Norman Macleod.

The interest which is felt in the work of the Society is shown especially in the circulation of the *Quarterly Statement*, which increases with every issue. The Committee desire that this publication should be looked upon as the best medium for recording important notes of travel or discovery in the Holy Land.

The amount received during the last year from all sources was £2,359 9s. 3d., an income not so large as in preceding years, owing to the partial break in the labours of the Society. The expenditure has been classified as follows:—

Exploration	55·62	per cent.
Returned to subscribers in the form of		
Reports, Lithographs, &c. ..	22·76	,,
Management..	21·62	,,

The present position of the Fund appears quite satisfactory. The Survey up to the present time has received a liberal and sufficient support. A large sum has been already received this year, while the Society is, for the first time for three years, out of debt, and has in the banks a balance of nearly £800.

The Survey work, as it proceeds, will perhaps become more expensive, and entail the necessity of sending out more men. The Committee are quite confident that a work so important, so interesting, so necessary, before a right understanding of the geography of Palestine can be arrived at, will not be allowed to stop for want of funds. At the same time, they urge upon their friends to guarantee them to the extent of their power, and so to remove the difficulties and hesitation involved in working in the dark.

Lastly, the thanks of the Committee are especially due to those gentlemen who, by acting as Local Secretaries, are spreading a knowledge of the Society, and collecting funds, and to all those, present here or not, who by subscription or advocacy are advancing our cause."

The Chairman.—I now have to call upon Captain Stewart to favour us with his Report, and in calling upon him to come forward, I cannot help expressing, on behalf of this Fund, my regret that one so eminently fitted to carry on this Exploration should be disqualified by illness, and that his return to the Holy Land has been forbidden by his medical advisers.

Captain Stewart, R.E., read the following Report:

"Before I enter into any statement regarding the progress of the Palestine Survey, I feel bound to explain that, owing to severe illness

which befell me very shortly after arrival in Palestine, I was able to do little more than commence the work. Much of the information which I shall lay before you is consequently derived from the reports of others rather than my own experience.

Mr. Drake, who took charge of the work from me, is well known as an accurate and accomplished Eastern traveller; I need not, therefore, do more than mention his name as my authority for the non-professional portion of the work; the non-commissioned officers of the Royal Engineers who were selected by me from the Ordnance Survey of Great Britain, have shown themselves worthy of the confidence trusted in them, and the observations sent home by them, and since worked out, speak in unmistakable language to the care and trouble they have taken and accuracy of the results in the autumn of 1871. The Committee of the Palestine Exploration Society did me the honour of offering me the charge of the Survey of Palestine. This Survey had for some years been contemplated as a fitting sequel to the excavations so successfully carried out in Jerusalem by Captain Warren, and the Survey of Jerusalem made by Captain Wilson and Lieutenant Anderson previously, and it was and is intended that this Survey should embody the results of all these explorers, and be as exhaustive as a scientific investigation can be.

Having accepted the post offered, the first duty which befell me was selecting the necessary outfit, which included camp furniture, our personal equipment, cooking utensils, and such like, for the nature of our work would necessitate living in tents, frequently far from towns of any size, and we must, therefore, depend largely on our own resources. The scientific equipment included surveying, meteorological, and photographic apparatus, presses for preserving botanical specimens, entomological and geological cases, &c. In selecting the scientific instruments, we obtained much assistance from the Government Departments. The Admiralty lent us chronometers, and from the Ordnance Survey Department at Southampton we got excellent and valuable surveying instruments, whilst from the Royal Observatory at Blackheath we obtained instruments with which to take meteorological observations. I mention these facts to show that although this work is for obvious reasons carried out by private enterprise, it still possesses the goodwill of the Government, which also assisted our undertaking by obtaining a firman or official authorisation from the Porte at Constantinople, authorising us to carry out the work, and desiring the Turkish officials to give the needful support and protection.

On the 21st October, 1871, the two non-commissioned officers started from Southampton, in charge of the instruments, stores, &c., whilst I followed a few days later by the Brindisi route, joining them at Alexandria. Here we were delayed a few days, waiting for a steamer to Jaffa, our port for disembarkation. Owing to the kindness of the Peninsula and Oriental Company's officer, we avoided landing our stores at Alexandria, but shipped them direct to the French steamer

for Jaffa, on its arrival from Constantinople. Everywhere during my sojourn in the Levant I found the mere name of belonging to the Palestine Exploration Society was a means of introduction and assurance of assistance. Whether this was owing to the genial qualities shown by my predecessors, or to the intrinsic merit of the Society's works, I am unable to say. At Jaffa our cases, thirty-nine in all, were exempted from paying duty, and were safely stored at the Jerusalem Hotel, which exists in the German colony which has sprung up lately in the outskirts of Jaffa. Amongst these well-conducted and hard-working colonists we stopped for a week, adjusting our instruments, somewhat shaken by the voyage. And then I started for Jerusalem, leaving the non-commissioned officers to complete our preparations for going into camp, also to take observations to fix the latitude of Jaffa, as that was to be our geographical point, to which the rest of the Survey is to be referred. As we were now in the month of November, at the end of a long dry summer, and no rain had fallen, there was literally not a blade of grass to be seen, the hard-baked ground was covered with a crop of ghastly limestones; yet a few weeks later when I travelled the same road, grass was springing up in all directions, and no doubt to travellers who visit Palestine in February or March, the plain country presents a luxuriant and fertile appearance. After calling on our consul and the English residents—but a small community, ten in all, I think—I found our firman had not arrived, so took advantage of the companionship of some other English travellers, and, together, we visited the Dead Sea and Jordan.

Finding on our return to Jerusalem that the firman had not yet arrived, I applied through our consul for a local order from the Pacha, but this he did not feel at liberty to grant, so I determined to commence operations at once and immediately purchased tents and engaged a dragoman to act as interpreter and general manager of our affairs. He was a Jew, by name Maham; for this race cling most tenaciously to the names of their forefathers. Returning to Jaffa we started on the 23rd November for Ramleh, which had been selected as a suitable place to commence the Survey by the measurement of our base line. And now, at the risk of being tedious, I must be allowed to say a few words regarding the principles on which the Survey is carried out: the first and most important duty is that of measuring what is technically called a "base line." As this line must be as nearly level as possible, a plain is the most suitable place for such measurement; this "base line" then becomes the standard of measurement to which all other lines can be referred by a mathematical process called trigonometry. This process is based on a known property of triangles, that if one side and the contained angles of a triangle are known the remaining sides can be calculated. The instruments we had brought with us were for the purpose of measuring those angles. A suitable piece of ground lying between the town of Lydda and Ramleh was found, and the base line measured three times with steel chains we had brought from England

for the purpose, and as the three measurements agreed very well we felt satisfied with the accuracy of the result. We had now a line of about three and a half miles in length fixed. Our next duty was to find suitable elevated positions to connect with the ends of the base line, by which means the country is covered with a net-work of triangles, the angles of which are measured by our theodolite, and our side ascertained by comparison with the base line, from which data the length of the other sides are found, or in other words the distances between these points. You must understand, then, that up to this date Mr. Drake and the surveyors have been engaged going from station to station, a most arduous undertaking in such a country as Palestine, where human life is held so cheap that the surveyors are always obliged to go in pairs and are armed, but I am glad to say no fracas has as yet occurred, and the only difficulty has been caused by the natives pulling down the posts, as they have a superstitious idea that the measurement is merely a preliminary to the sale of their land. So rooted is this feeling that I have been informed that when the telegraph posts between Jaffa and Jerusalem were first erected the natives pulled down and destroyed them, and this was only put a stop to by making the owners of the land on which the posts stood replace them at their own expense. Mr. Drake was obliged to adopt a similar mode of dealing with the Arabs on one occasion. As I was compelled to leave Palestine in January last I am obliged to quote the reports of others as to the present position of the Survey. Sergeant Black reports that 180 square miles of country have been triangulated, and a considerable portion of the detail filled in; the whole has been drawn in plan, and observations, made to connect this Survey of Jerusalem and vicinity with the former, are made by Captain Wilson, so that it will not be necessary to go over this part of the work again, but simply to reduce by scale the existing plans and transfer to our maps; in short, I may say that a tract of country extending from Jaffa on the coast to Jerusalem has been triangulated and laid down in our plan. This I believe to be satisfactory, but I would urge upon this meeting that if the strength of the surveying party were doubled the work would be carried out with double the rapidity, and yet at very small proportionately increased cost. This can be readily understood when you call to mind that the principal cost of the work is the pay of the officers superintending the cost of transit, guards, and such like. Now the cost of these items is the same for a party of two as for four surveyors. Therefore I may conclude by saying that the recovery of Palestine depends upon the British public who support the work, not as in the olden Crusading times by their blood, but by what is as potent in these days—their gold."

The CHAIRMAN.—My lords, ladies, and gentlemen, I hold in my hand letters from several eminent persons, who have expressed, in different ways, their regret at being unable to be here to-day,—the Rev. Charles Kingsley, the Very Rev. the Dean of Chester, the Lord

Bishop of Winchester, the Lord Bishop of Exeter, and several others. I am very sorry, for my own part, that the duty of presiding to-day has not fallen on the shoulders of some one else, because I have presided at these meetings for several years, and the very little I have to say upon the subject of this Exploration has been said again and again; and besides that, the Committee had cherished the hope that they should have induced a certain illustrious person to be here to-day who has been more than once round the world, and who has the ability to describe most vividly what he has seen. However, we have been disappointed in that hope, and you must, therefore, accept me for a moment. But I rely much upon the strength of those by whom I shall be supported. I shall have the pleasure of calling upon Viscount Ossington, who has done a great deal for biblical study, and also the well-known travellers, Mr. MacGregor and Dr. Mullens; Mr. Beresford Hope has also consented to speak on this occasion, and also Mr. Glaisher, who has surveyed the world *verticalement* more than any one else. I shall have besides the pleasure of calling upon M. Clermont Ganneau, and I shall have a word or two to say about him when he comes forward. Having spoken to you about those who are to follow, I will now say a few words about the business of to-day. About five years ago, a preliminary meeting was held to consider whether it was desirable to establish such a Fund as this or not, and a great many persons eminent in literature and knowledge of this subject met at the Jerusalem Chamber, and seemed to be unanimous in their agreement that whatever we thought about our knowledge of Palestine, the sum total of that knowledge was very small. Speaker after speaker told us, with remarkable unanimity, that about the natural history of Palestine we knew but little; that about its topography we knew but little; and that of its geography we really knew little or nothing. It was felt that at that time the mind of England was a sheet of white paper, as far as Palestine was concerned. But do not let us be unjust to those who have gone before us; there has been a great deal done already, and the writings of men like Robinson will never lose their value; but still, as science advances we become more exact, and there is a great want of exact knowledge even in the parts of the science in which those eminent men did so much. It might be admitted in one sense that this was not our business as Englishmen; and we did hear whispers that this was not our business, and that we might go out with a great deal of money and come back with a very limited result. Whispers of that kind attend every undertaking, whether good or bad—even the best is not free from them; but the answer is, that while in one sense Palestine is not our concern, in another sense it is, because it is the pride and honour of our nation—and this not shared by one sect, school, or party—that it has made the Bible its own book; it has done more than any nation for the knowledge and circulation of the Word of God, not merely for those who speak English, but for those who use all kinds of different dialects,

in all the corners of the world; and having this pride it is but natural that we should feel a wish for this collateral knowledge, and indeed for all those various branches of knowledge by which the Holy Scriptures can be best understood. About the money question I had no fear. It might from the nature of the case be expected that it would be said that our money appears to be wasted or spent for small results. But this country has a great deal of money to spare, and often spends it in foolish ways; and we could not think that for a good object money would be wanting. Now, when we look back upon those five years, we find that a sum of not far from £20,000 has passed through the hands of this Society, and that it has been spent in the manner you have heard upon the various objects of the Fund; fifty-five and a half per cent. of last year's expenditure went towards the expenses of actual Exploration, twenty-one per cent. for expenses at home—I am afraid that is a large amount, but it is not more than is necessary—and about twenty-four per cent. was applied to the production of reports and information which have been put into the hands of the subscribers. Now the interest that is felt in these subjects is manifest, because one result has been the sale of the book called the "Recovery of Jerusalem," in which the work of this Society is fully described; and there has been a large profit on that which in other respects might be considered rather a dry book, showing that this Exploration is felt to be a very interesting subject. Now we met very soon with what is the great obstacle in a work of this kind, because you will remember that as regards Jerusalem it was all work done under ground. I remember that Sir Henry Rawlinson appealed to us on that subject last year, and asked us whether, if we were to dig under the piers of York Minster to seek for a buried city, we thought we should be welcomed by the ecclesiastical authorities. It is obvious that there would be a great jealousy about explorations of this kind. The results are necessarily small. What can you find by digging a shaft to a great depth, and then running a narrow channel, compared with what you can do by surveying an open country from a neighbouring height? What can be done in Jerusalem has been already achieved, and we have now turned our attention to a subject which was not thought of when we began—that is, making a map of the country of Palestine. Again I think I hear you say it is not our business as Englishmen, and that that work might be left to somebody else. Yet there is nothing so useful as a map, and when we get the whole country made out as you see there (referring to a map), and when the different triangles have been worked out, when once you get the bearings of the principal points laid down, you will have a framework into which any discoveries that may be hereafter made by any traveller will be able to be fitted; you will establish a set of categories into which all future discoveries will come, and you will have done a great service to the subject. That leads me to another point: in addition to what this Society has done by its own explorers, we

hoped to raise up a greater interest in the subject; we hoped that not only our own explorers, but others, would be stirred up to look into these matters. And so it has proved. We shall be told that the Moabite stone was not discovered by our explorers, and that is true; but we seek to raise up an interest in the subject, and we seek to have a body of persons to whom anybody who makes a discovery may at once turn to see what the value of it is, and in that way an advantage as great as those gained by our explorers will be achieved. It is not necessary now to speak to you in the language of exhortation. The Palestine Exploration Fund has been before us for five years; it is for the first time out of debt; it has a balance at its bankers; it is doing a positive work of progress, of which you shall know from time to time; and I am sure that we shall not stand still for want of funds, and that the stream of your bounty will not fail. Speaking, not as a traveller, but as one of the home-staying public, I hope this institution will go on and prosper. I believe that accurate knowledge is never to be undervalued, and that the more we know about the Holy Scriptures from collateral sources, the more our belief in them will be confirmed, and that with the help of our investigations many things which when we read the text alone may seem dim and doubtful, will stand out more distinctly, and that the personages and events recorded will seem to live and act before us. I have now the pleasure of calling upon Viscount Ossington to move the first resolution. For myself, I will only add that I heartily wish prosperity to the Palestine Exploration Fund; I believe it did meet a great want, and I believe it will continue to enjoy your confidence and support. (Cheers.)

Viscount Ossington.—My lords, ladies, and gentlemen, I came here to-day to testify my respect to the Right Reverend Prelate who occupies the chair, and also to support by the best means in my power the object which the Committee has in view. The Right Reverend Prelate having called upon me to move the resolution, his request is of course a command, and I desire to execute it in a few brief words. The resolution which I have to propose is a very simple one—"That this meeting pledges itself to carry on the Survey so ably commenced by Captain Stewart and Mr. C. F. Tyrwhitt Drake." That is the present object of the Committee. Now many results may follow from a careful exploration of the country, quitting the usual and beaten tracks. The Jews were a hill-inhabiting people, and I think it is highly probable that the sites of many towns which have great interest for us and are of biblical repute may in this way be discovered. It is very difficult to satisfy ourselves about geographical matters from the descriptions of travellers. I remember a remarkable instance which happened in connection with this very Society not many years ago. You may remember perhaps that there was a careful examination made of Mount Sinai by officers of the Corps of Engineers, and a part of the model made from that survey now stands upon your table. A friend of mine who was engaged in a learned and important work, having read all

the books of travels, and all the accounts he could get, tried to fix upon the probable point upon which the law was delivered on Mount Sinai, and he had, after great pains and trouble, arrived at a certain conclusion. That conclusion was that the real spot was at the south end of the mountain; he thought that the majority of the authorities lay in that direction—always, I must take leave to say, with the exception of a distinguished traveller well-known in the neighbourhood of our Abbey, who now sits at my left hand, and who had himself entertained a different view, which I believe in the opinion of all now turns out to be the correct one. My friend having studied all these books, came to London, and he learnt that this survey made by the Engineers was to be seen. He went to see it. It was no doubt a painful thing for an author having made up his mind, and having expressed a decided opinion, to find that he certainly had been entirely wrong. He went to see that very plan, or one on a larger scale, and satisfied himself that according to the description in the Bible of the plain upon which the Israelites had been encamped, it was impossible that it could have been on the rough uneven ground such as these historians and narrators had fixed upon, on the south extremity of the range; and that, on the contrary, the north extremity possessed every requisite for the encampment of a numerous host, a valley expanding into a wide plain, extending itself from the very root of the mountain. It strikes me that that is a forcible instance of the value of a careful survey made by competent persons. It is now proposed that such a survey should be made of the whole of Palestine. I cannot conceive a more delightful possession than that would be: a good map is always precious—a map of Palestine framed on the scale of the Ordnance Map of England would be a most delightful possession to everyone. With these few words I beg to move the resolution. (Cheers.)

J. MacGregor, Esq.—My lord, I think we may safely assume that every school in every Christian country in the world has a map of Palestine, and there are thousands of maps of Palestine in private families, but we are now too sure of the fact that not one of these maps is correct, complete, or sufficiently minute. The resolution which has been moved, and which I have now the pleasure of seconding, pledges this meeting that we shall have a map of Palestine which shall be complete, correct, and sufficiently minute. If we had a complete map—it is a little country, only the size of Wales—we should know these three points about every mountain, town, and river in the country; how far east of London the place is—that is, its longitude; secondly, how far south of London it is—that is, its latitude; and thirdly, how high or low it is above or beneath London—that is, its altitude. Then if we knew these things we could fix many others afterwards that it is necessary to know. Very few persons are aware that our maps, even that one facing you, are very incorrect. I shall only take one verse in illustration of this: "Are not Abana and Pharpar, rivers of Damascus better than all the waters of Israel?" Now in most of our maps

there is only one of these rivers, instead of two; in some maps they are both shown to run into the sea, though, in fact, there are 2,000 feet of mountain between them and the sea. There is such confusion in the maps about these two rivers that the questions of a little child would make us all ashamed of our ignorance; and after all these thousands of years it is remarkable that even the Jews in London cannot tell you the present names of these rivers. Now, besides being incorrect, our maps are incomplete; a great deal of the observation from which they are prepared having been done by private travellers, whereas it is essential to have the points established by professional men, in order to make sure of the main features. When I was on the Jordan I found there were ten or twelve miles of the map quite uncompleted. There was a great marsh to be mapped, and the question was when you got that, where this little bit was to be put into the real large map of Palestine. When I happened to look through the reeds and strange growth of papyrus, there was one small point of a hill which could be seen by standing up in my canoe, and I found that that identical point had been settled upon by Captain Wilson, who made an astronomical observation of it, and so any private traveller was able thereby to add his quota to the large map. We want to know how high and how low these places are, and to find out whether the "ups and downs" in the Bible are correct; and for this reason, a large slice of it, including the Sea of Galilee, is below the level of the sea; no other such place exists in the world. Therefore when we read in the Scriptures of "going down" to Capernaum, it is not going down as we call it, but actually "going down" 650 feet below the level of the sea. We want to know how high Jerusalem is above this Dead Sea, and so on. You will see one result of this by looking at this plate, and the water I pour into it from this jug. Suppose this is a large tract of country; when water is put into it (and there is salt in the clay), the water would become salt. Then if you suppose this plate a shallow lake, if the lake gets out into the sea, the salt will go away The water is eating the salt out of the mountains; but if it runs on to this tumbler here, and supposing it is ten times as hot there as it is outside at the present moment you will have the heat raising up the water in vapour, but the salt remains. Then what would be the result? This water in the plate, the Sea of Galilee, will be always fresh, but *that* below will have salt in it, and it will become brine; and therefore in this Dead Sea we find hundreds of feet of rock-salt. Altitude influences this, and the climate and the fruits. Believing, as I do, that it is most important to have a complete, accurate, and sufficiently minute map of Palestine, I am sure I may do well to second the resolution. (Cheers.)

A. J Beresford-Hope, Esq., M.P.—My Lord Archbishop, I feel myself much honoured by being called upon to support this resolution. My Lord Ossington and Mr. MacGregor have pointed out to you the importance of the work in which we are engaged—the Survey of Pales-

tine—and also the singular smallness of the country which is to be surveyed. When we consider the enormous, the overwhelming interest that, to all Christian nations of the world, this little land of Palestine possesses, I say it is no less than a disgrace to Christendom if we do not, as Christians, as Englishmen, and as civilised men, make ourselves acquainted with every the least detail of the geography, the archæology, and the history of the land in which the most thrilling and sacred records of the Gospel are centred. When I say this, I feel that I say so in the name of all the civilised and Christian world; but what, my Lord Archbishop, what is the reason why England should especially come forward in this work? You have given one and the highest reason for the obligation, namely, that England has made the Bible her own book. There is also another reason which is not so sacred, but which is still very important. What has been the pride of England?—what has been the boast of England? England's onwardness in everything that shows strength of mind and strength of muscle. England was the first nation that explored the trackless wastes of the Northern Sea; England was the first nation that sent her ships to be crushed and played with among the icebergs in the Polar Ocean; England, if she has not attained the North Pole, has found the North-West Passage; England, or let me say more accurately, Britain, has sent her sons to explore the heart of Africa; and our own England it is which has taken every ice peak of Switzerland as her playground, and gaily planted her foot upon the Matterhorn. Viewing all this, it will be not less than a disgrace to our civilisation, our Christianity, and our common sense, if, after having made enterprise our own in those regions in which discovery simply implies the unveiling of the dumb present, simply the record (geology apart) of an actual condition, widowed of all the stirring illustrations which in old lands come from traditions of past history, we are then found lagging on a spot where discovery is the unlocking of the great treasure-house of the world's supremest chronicles. If we explore the heart of Australia, or the lakes of Africa, and yet leave this little district, a few counties broad, of Palestine, within a few days' steaming from our own country, untracked and undeciphered, it will be a disgrace to us as Englishmen. I repeat that England in her enterprise, in her science, in her literature, in her love for the Bible, in her muscularity, and in her determination to be the great travelling nation of the world, has given pledges from which she cannot retract, that she shall not leave the Holy Land alone and uninvestigated. On these grounds, my Lord Archbishop, I do urge—the door having been opened for us—that we should undertake and prosecute a work like this, which is so comparatively easy to what it was in our fathers' times, and that, now steam and magnetism and the sun and the elements have all sworn together a great oath that science shall no longer be impossible to man, man shall ratify that oath on the sacred soil on which the deepest hopes of his redemption are planted. I call upon this Society, as representing the education, the good feeling,

and the reverence of England, most heartily to support this resolution. (Cheers.)

The Rev. Dr. MULLENS.—My Lord Archbishop, I will support this resolution in a very few words, because I have little claim to the attention of this meeting, especially in the presence of so many travellers in Palestine, never myself having had the opportunity of paying that country a visit. But I have had, my lord, the opportunity of helping forward the work of this Society, in paying a visit to our friends in America. It was through a lecture delivered by my friend Dr. Allon and myself in New York, in the presence of a large number of ministers and laymen, that we were able so to stir the hearts of our friends in that city as to induce them to found a Society for the Exploration of Palestine similar to our own; they started with the understanding that they should survey the country east of the Jordan, and that the work to be done west of that river should still remain to the Exploration Fund in England. We need not surely any additional arguments for carrying out an excellent scheme like this. Those of us who know Palestine by reading the works of successive travellers like Irby, Mangles, and others, can desire nothing more than that all the maps that have come from the work of those travellers shall at least be thoroughly corrected by that which alone can put them on a sound basis, namely, by a careful trigonometrical survey. Those who are acquainted with the trigonometrical survey of our Indian Empire, as well as with the Ordnance Survey of Great Britain and Ireland, will see with what ease, considering the smallness of the country, this important work can be carried on. We have heard from Captain Stewart what able men are available as assistants in carrying out the Survey, and we must all rejoice that the Fund was induced to take this valuable scheme in hand. We must have observed the readiness which even the most scientific and scholarly travellers have exhibited, when they know they are in the district in which particular localities did lie, to prove that these interesting sites are in the districts they have passed over. One of the most noted illustrations of this is to be found in the numerous suggestions that have been made for the site of the Great Fountain of Kadesh, in the Southern Wilderness. We may also take another instance in which Dr. Robinson identifies a great ruin at one place, whereas had he known more about it he would have found that it was two or three miles away in another direction. All these things have been found and laid down for us by Professor Palmer and Mr. Tyrwhitt Drake, and when we see the results of such careful surveys, and what valuable improvements have been made in our maps of the Peninsula of Sinai, I am sure we shall all unite in wishing this enterprise of the Trigonometrical Survey of Palestine God-speed. (Cheers.) I have great pleasure in supporting the resolution.

An amendment was moved by Mr. MOONEY, but no seconder being found,

The resolution was put and carried.

Mr. GLAISHER moved the next resolution: My Lord Archbishop, from the first day that an opportunity presented itself to me of obtaining scientific information in that most interesting country of Palestine, I eagerly accepted it; urging upon those who were about to travel in and explore the country, the importance of ascertaining all about its topography, its archæology, and its climate. We knew next to nothing of Palestine five years ago, but we did read in the Bible that it was a land of corn, oil, and honey, producing almost everything needed by man; and we were led by inference to conclude that it has a climate of a most extraordinary character, indeed that it must be a land of many climates to produce so many things. The first thing I did, therefore, was to urge upon my friend Mr. Grove to send out instruments, which I obtained and furnished him with myself, to be used to ascertain the character of the climate of Palestine as a matter of science, a subject of which we were in utter ignorance, and which was one of no mean importance. Now, I am able to state that I hold in my hand here a paper which I have prepared, to appear in full in the Quarterly Report of the Palestine Exploration Fund,* upon the observations which have already been made. In this paper I confine myself to the meteorology of the country, and it will be found that it exhibits some remarkable characteristics. The temperature rises to 104 deg. in May; and the meeting will be able to judge of what this means when I say that to-day it is 84 deg. with us, and that it was 86 deg. yesterday. And then not only is the temperature as I have stated it in the month of May, but when we come to June, July, August, and September, it exceeds ours by many degrees; and when I look at the characteristics of a climate which day by day averages nearly 90 deg., I wonder how it has been found possible to work out this survey as a whole. I have been myself a trigonometrical surveyor on the Ordnance Survey of Ireland, and I am astonished how a diagram like that presented to us could have been completed. I may be permitted to say that a base line such as that, implies that three or four miles of country have been measured with the utmost accuracy, and everything depends upon it. If that line is correct, every other line will practically be so too. I have looked carefully into this diagram, and I see that Captain Stewart has completed a series of triangulations on one side—coming round here also on the other—and so deduced a verification of it. I have examined and checked the diagram, which can scarcely speak to others, as it does to me, of Capt. Stewart's judgment and knowledge in carrying out this survey. (Hear, hear.) I have already said that there must be many climates distinct from each other in a country like Palestine. There is not a drop of rain for several months together; but in January, February, and March more than half the days of the month are rain—eight inches of rain in one place, eleven inches in another, and elsewhere not more than two or three. It is a climate without many clouds. Professor Tyndall

* See *p.* 92.

has often told us in this room how the water in the atmosphere prevents the heat from burning up everything; and we know now what comfort we feel when there is a cloud before the sun, and how useful clouds are at night to prevent radiation; but in Palestine there is this burning heat by day, and to work under those circumstances is something exceedingly difficult. I would impress upon our Committee not to urge too much upon the gentlemen who are sent out there, particularly in these months. Of course we are thankful for everything they do; but it is important that they should not expose themselves to needless risks, and we should take care not to exact from them more than can reasonably be expected. As the time is getting on, I will not trespass upon you longer. I shall place this paper in the hands of the Secretary, with a view of its appearing in the next Quarterly Report. The motion I have to propose is, "That it is desirable to provide means to secure an accurate record of all archæological discoveries that may be made in the progress of the Survey"—we have already had the Moabite stone, and I would urge the importance of taking steps by which records of an archæological nature may be preserved, "and also of examining as far as possible the physical phenomena and natural history of the country." This will of course include geology and meteorology, to which I have devoted a great part of my life, and I would urge upon every one connected with this Society to increase our means of knowledge by enabling the Committee to continue their observations. I have great pleasure in moving the resolution which I have read to the meeting. (Cheers.)

The CHAIRMAN.—It is now my great pleasure to introduce to you M. Clermont Ganneau, and I only regret that he will have to address you in a language less familiar to us than our own. M. Ganneau's name is already known to us in connection with the deciphering of the inscription on the Moabite stone, and as a great authority in Semitic scholarship; indeed, his word is law on such subjects. I have persuaded the Very Reverend the Dean of Westminster to address the meeting after M. Ganneau, and from him we shall be glad to hear some remarks upon that gentleman's address. (Cheers.)

M. CLERMONT GANNEAU*.—There is certainly no other country which offers attractions to one who loves to investigate the past, similar, or equal, to those of Palestine. Not only have we the detailed narratives and the topography of the Bible, but also a long continued chain of descriptions from the earliest ages of Christianity to the present day. We have, besides these, a perfectly marvellous fixity of local traditions among the native populations, especially as regards the nomenclature. These populations represent the ancient races of these countries. We may find among the fellaheen, descendants not only of the Hebrews, but also of those tribes which, conquered by the Hebrews, have yet lived on in the country, and have resisted all the numerous waves of invasion which passed over Palestine. Among these are to be found traditions, oblite-

* M. Ganneau addressed the meeting in French.

rated, indeed, and reduced to childish stories and popular legends, which yet, if carefully and intelligently collected, would throw light upon the history, the religion, and geography of the Hebrews. Modern *savants*, following the example of Robinson, have already had recourse to this mode of obtaining information for the identification of places. At the same time, the greatest care must be taken not to be misled, as has already happened in many instances, by fallacious resemblances. A profound knowledge of Arabic dialects, as well as of Hebrew, is indispensable before undertaking what is really the most delicate manipulation. And great philological experience is so much the more necessary to one who interrogates fellaheen, that there are many facts of the highest importance, philologically speaking, in the idiom itself of the fellaheen. We call this Arabic; it contains, in reality, a vast quantity of forms and archaic phrases which carry us back far away, and to an epoch when the Arabs had not as yet conquered the land of Canaan.

Permit me here to quote, in order to show how important popular tradition may be, when properly employed, certain observations which I have myself made. Let me first mention the "Stone of Bohan." This, as you know, is mentioned in the book of Joshua as one of the points marking the frontier line between the tribes of Judah and Benjamin. It is nothing more than the "Stone of the Thumb," and is called now the "Stone of the Finger"—"*Hadjar el Asbah.*"*

There is also the Stone of Zoheleth, which I have found in the village of Siloam, under the identical name Zehweile. This identifies En-Rogel with the "Fountain of the Virgin."

Bethesda is nothing more than the present Church of St. Anne, where an old tradition has placed the house of the mother of Mary, calling it *Beit hanna*, "House of Anne." Now this expression is exactly identical with *Bethesda*, both signifying *House of Mercy* or *Compassion*.

I could cite several other important places whose sites I have discovered principally by means of these popular indications; for example, the long-sought Adullam, which is called at present Edoulmiyeh; Azekah, now called Azhik; the royal Canaanite city of Gezer, found by me more than a year ago in the Tell el Djezîr, near the little village of *Abou Shusheh*, which Mr. Drake, to whom I communicated my theory, has since visited.

If Palestine is abundantly provided with historical documents and popular traditions, it is singularly destitute of archæological treasures. In spite of the number of travellers who have visited its soil, in spite of the excavations which have sounded its depths and furnished the solution of topographical problems, we must acknowledge an almost absolute want of inscribed monuments, the land of the Jew furnishing in this respect a strange contrast to Egypt, Greece, Rome, and even Phœnicia. Not even in the tombs, which in other countries furnish us with a pale but exact reflection of the living world, do we find an inscription. This *lacuna* ought to be filled up. Some isolated but significant discoveries have recently come to light, showing that we must not despair of finding in Biblical

* See *Quarterly Statement*, April, 1871. New Series, p. 105.

contains original documents of the greatest importance. It will suffice to remind you of the Moabite stone, which is undoubtedly a grand fact in the history of archæological discovery. This monument gives us at once the most ancient known example of its alphabet, and, so to speak, *an original page of the Bible*. And I may mention here that, side by side with the famous passage containing the name of Jehovah, or Jahveh, the sacred tetragram of the Jews, I have deciphered, since my first publication, a new passage where mention is made of the *Ariel* of David, taken by King Mesha at Ataroth, and dragged by him before the face of Chemosh at Kerioth.

I have had the good fortune to discover another monument, which, although it does not go back so far as the stone of Mesha, is not the less one of the most interesting and venerable Jewish monuments yet found. I speak of a stone of the temple, bearing a Greek inscription which prohibits the Gentiles under pain of death to enter the sacred precincts. An exact reproduction has been made of it, and now hangs before you. This precious monument was buried in the foundations of an Arab edifice some metres distant from the Mosque of Omar, that is to say, close to its original place. Two letters only were visible above ground. Attracted by their palæographic appearance, I began to dig, and was happy enough to uncover the whole block. The translation, with a few remarks of my own, has been already published in the *Athenæum*, and by the Committee of the Palestine Exploration Fund. It is remarkable from many points of view. It reproduces certain expressions actually used by Josephus, who teaches us that the balustrade round the temple was surmounted at regular intervals by pillars having inscriptions in Greek and Latin forbidding strangers to enter. It throws light on one of the principal events in the life of St. Paul, threatened with death on the charge of having polluted the sanctuary by introducing a Gentile. It is the only authentic relic yet discovered of the temple itself. It has been a witness to the preaching of Jesus, and besides all this, it may, in the hands of *savants*, be made an instrument of investigation in clearing up the obscure question of the temples of Solomon and of Herod. The block on which the inscription is engraved is, in fact, by its dimensions, by the manner in which it has been wrought and cut, a specimen of Herodian work. It may thus serve to help us to distinguish between the work of Solomon and that of Herod. And it may further serve as an excellent *point de départ* for the construction of a palæographic scale for classing chronologically the Greek inscriptions of Jerusalem.

I will add that I have a conviction that we shall certainly find more such inscriptions in Jerusalem, whether in Greek or Latin, of the same period. Up to the present the texts found in Palestine and Jerusalem have been few in number and of small importance. Those in Greek and Latin have been published by Mr. Waddington. They amount in all only to *ten*; and all that have been found in Jerusalem are contained in a single page of the Count de Vogüé's great work. Researches undertaken under conditions by no means favourable, and in the rare occasions of leisure left

me by my official duties, have enabled me to collect, besides the texts already mentioned, upwards of eighty unpublished inscriptions in Hebrew, Greek, and Latin. Such a result, obtained with insufficient means, enables me to hope that much more may be done if we are provided with the necessary resources for a more complete investigation.

Among these inscriptions there are some of great palæographic and historical value. Among others I will cite two Hebrew texts in Phœnician character discovered by me at Siloam, and given to the British Museum, where they will soon be deposited. Two Hebrew *cachets* in Phœnician characters give the Biblical names of Ananias, Azarias, and Achbor. These four texts belong to the time of the kings of Judah. There are also several inscriptions in square Hebrew, two of which are bi-lingual, Greek and Hebrew; a weight in stone with a Greek inscription dated from the reign of a king new to history; a votive inscription of some great Roman lady named Pompeia Lucilia, engraved upon a slab of marble found on the side of Bethesda; two inscriptions of the Roman legion named Fretensis, one of those legions engaged in Titus's siege of Jerusalem.

In the vast quarries which extend under Jerusalem, and are now called the Royal Caverns, I found cut in the rock by some workman an exceedingly old and curious *graffito*. The original now lies on the table before you. It is a mere design, but represents exactly one of those Assyrian animals, winged lions or bulls with human heads. It is the more curious inasmuch as the Hebrew cherubim have been by some, not without appearance of reason, identified with those fantastic monsters.

A rapid *résumé* such as this is at least sufficient to show that the soil of Palestine, systematically examined, will break the long silence which it has hitherto preserved, and we may hope to see the disappearance of that strange anomaly of a total absence of inscriptions close to the very cradle of that most glorious of human creations, alphabetical writing. To find these buried treasures it is not necessary to search in the regions beyond the Jordan, where excavations will for a long time be extremely costly and dangerous. Without going so far, it is at Jerusalem itself, or in its environs, that we must seek in order to find contemporary annals of the kingdoms of Judah and Israel. That we shall do so I am sure, provided we attack certain points previously determined on by careful considerations of history.

Jerusalem itself, although it belongs to that category of cities so ungrateful to archæology, because they live a continuous life, and therefore, so to speak, slowly devour themselves, is far from being exhausted. A large number of topographical questions are still in suspense, some of capital importance, such as the site of the Tombs of the Kings of Judah, and waiting for a solution. Let us hope that the solution of these problems will be effected through the agency of this Society—a fitting crown to their noble work.

The Very Reverend the DEAN OF WESTMINSTER.—In the very tropical state of this atmosphere, approaching almost that of the

Valley of the Jordan, I will not detain you long. I am in the novel situation of dragoman of the dragoman of the French Embassy in Constantinople. I take it for granted that most of you have been able to follow M. Ganneau's most interesting paper, but I will just run through the main points which he has touched upon, showing the opportunities that are opened to us by this Exploration Fund, and showing also the great services that an intelligent resident in Palestine like M. Ganneau is able to render to our objects, and which we the more value, because being a foreigner, and not being specially connected with us, we feel bound to acknowledge the honourable manner in which he has behaved with regard to the antiquities he has told you of, and especially with regard to the Moabite stone. (Hear, hear.) It is a lamentable circumstance, that rivalry between nations should have penetrated into the Holy Land, but it is very gratifying that, in this instance, foreign nations feel, like us, the importance of the subject, and that, like us, they are above those petty disputes. (Hear, hear.) One of the points upon which M. Ganneau chiefly dwelt, as opening themselves more and more to our investigations, is what has always struck me, namely, the remains of the ancient primæval inhabitants of the country before the occupation of the Holy Land by the Israelites. This is the more interesting because it may possibly be more easy to find from their hands monuments of a more primæval country, such as we find at Stonehenge and Avebury, and other remains of works executed before the Norman conquest in this country. M. Ganneau mentioned various monuments which reach back to those times, but which were, perhaps, turned to new purposes by the Israelites. Nothing is more interesting or more likely to be discovered than those ancient and venerable stones which have existed in Palestine from remote ages; and it was with extreme delight that I heard M. Ganneau say that he believed he had discovered two such relics as the stone of Bohan and the stone of Zoheleth. It is impossible to read the mention of these in the books of Joshua and Kings, and not wish to lay our hands upon them; and if M. Ganneau has done so, I congratulate him with all my heart. (Hear, hear.) His great knowledge of the subject, the fact of his living on the spot, and his familiarity with Arabic, has enabled him to identify with more certainty than had been done before, the names of different places mentioned in Scripture. Amongst these is Scopus, "the look-out place" mentioned in the Maccabees, and which he has found by its identity with the modern name which means "the Observatory." Then again that place known as Adullam, which is so interesting to politicians in England. I remember speaking to a distinguished fellow-countryman of M. Ganneau, M. Montalembert, and he was complaining that in his own country, where the Bible is not so well known as it is in England, no one could guess what could be meant by the "Adullamites;" it was even thought to be a company of some kind. Now that the actual place bearing the name of Adullam can be identified by

M. Ganneau, I should hope that all his countrymen will for the future know as much as we do about all its meanings, historical, geographical, and political. There is also Gezer, that old city which M. Ganneau has found out, and I am glad to learn that he made this discovery of Gezer so long ago as last July. Others have come upon his track since; but it was well known to M. Ganneau long before, when he mentioned it to my friend Mr. Grove, who, I may say, has begged me to explain, what I am sure you all regret, that he is prevented being present to-day to see the results of this Fund, to which he with so much zeal and energy has contributed. (Cheers.) What M. Ganneau has said about the Tombs always struck me. To whom these innumerable ancient tombs belonged to we do not know now; but we may be able in them to find traces of the history of Palestine which have not yet been discovered. Then, with regard to inscriptions, we come to the Moabite stone. I need not enlarge upon that. It is what M. Ganneau says, it is like finding an original page of the Bible itself. There is no reason why the actual inscriptions on the Moabite stone should not have been incorporated by the authors of the books of Chronicles and Kings. It would then have been in reality, what he now calls it metaphorically, an original page of the Bible. (Hear, hear.) Then he has found an original page of Josephus. Poor Josephus often meets with but very scanty justice, but the inscription from the Herodian Temple does bear out what Josephus describes as having been written on the enclosure of the temple, namely, that any one who came within those rails or palisades, if they penetrated within, would be put to death. The whole of this bears most directly upon that most wonderfully vivid scene which is described in the twenty-second chapter of the Acts. He also tells us what I was not aware of before, that there are inscriptions reaching back to the times of the kings of Judah; and if so, there is no reason why, by greater exploration and research, we should not find many more of such inscriptions. (Hear, hear.) While M. Ganneau's account is extremely interesting as describing what he has done, it is also extremely stimulating to find what can be done by us by such funds as you are able to place at our disposal. (Cheers.) I have expressed to you the regret that I have in Mr. Grove not being present on this occasion. There is another name which I cannot help mentioning, because I am sure there is no one here present who does not regret the loss the country has sustained in the death of Dr. Norman Macleod which we have heard of this morning. Dr. Norman Macleod had expressed in a letter which I hold in my hand, his great desire to be present on this occasion, but owing to medical advice he was prevented coming, and the catastrophe which has deprived the world of his genial and charming presence was the result of that illness. (Hear, hear.) It is now my pleasing duty to ask the meeting to return their thanks to His Grace the Archbishop of York for the unfailing zeal and ability with which he presents himself on these occasions. His Grace

has many avocations, and it is most gratifying to find him again presiding at an institution to which from the first he has given his countenance, and for which we owe him still greater gratitude because he has not been drawn to it, like myself and others, from local interest in the soil of Palestine, but from an abstract love of knowledge which prompts him so far as he can to do anything that can throw light upon the sacred history of the Bible. (Cheers.)

Professor E. H. PALMER.—I rise with great pleasure to second the resolution of thanks to the Archbishop of York. This meeting has been one of the most interesting I have ever had the pleasure of being present at; for although the Palestine Exploration Fund has always had good work to report to the public, yet I doubt whether it has ever been better or more usefully engaged than it is at present. The Survey of Palestine is a work that has long been wanted, and the party that has now gone out is the most suitable for this purpose that could have been chosen. The officers and non-commissioned officers of the Engineers are proverbially well-fitted for their work; but the party now in Palestine have the valuable aid of Mr. Tyrwhitt Drake; and I am pleased to take this opportunity of testifying to his immense value as an explorer, and to his possession of indomitable courage and perseverance—qualities which are essential to an archæologist, but more particularly to the traveller in Palestine. No one but those who have been there can understand the difficulties that constantly beset an explorer's path. Besides guarding against danger to himself, he has to exercise all his ingenuity to counteract the cunning devices of the fellaheen to withhold information from him or lead him astray. (Hear, hear.) Under these circumstances, his task is by no means an easy one. Mr. Drake travelled with me for twelve months, and I can assure you that he is well able to overcome these difficulties, and I congratulate the Fund on having so valuable a person to support their labours. (Hear, hear.) Ladies and gentlemen, I will not detain you longer, but will conclude by seconding the motion that we return our cordial thanks to the Right Reverend Prelate in the chair. (Cheers.)

The resolution was carried unanimously.

The CHAIRMAN.—My lords, ladies, and gentlemen, before we separate I desire to thank you for the mode in which you have received me; and I would add one word in order that we should part on good terms with regard to the adverse motion which has been made. If I may return once more to that simple illustration of our friend Mr. MacGregor, I should say that the gentleman who spoke of the importance of attention to moral ruins has treated the funds available in this country as a small fixed quantity, like a glass of water, of which none should go abroad because all of it is wanted at home; but the fact is that the Fund upon which we draw is inexhaustible. Its task is to raise people up to that which is noble and good, and out of that Fund you will elicit something for all the objects and all the charities which the

mover of the amendment has in view. I do believe that the more you ask the people of this country to give, the more they will give. and I am sure that not one of you would have anything to do with this Society if you thought that we were hurting any other philanthropic objects. (Cheers.) I thank you for the reception you have given me, and hope we shall meet again next year. (Loud cheers.)

NOTE ON VASES FOUND AT THE BIRKET ISRAIL.

BY GREVILLE J. CHESTER, B.A.

In "The Recovery of Jerusalem," p. 479, mention is made of certain vases of massive black ware discovered at Birket Israil and elsewhere, which I there ascribed "with very great hesitation as belonging" to the Græco-Phœnician period, and of which I stated that "considerable doubt exists as to their proper appropriation." I am now able to assert positively that these vases are of early *Arabic* manufacture. Among the vast pottery-strewn mounds of Fostat, Musr-el-Ateekah, or Old Cairo, I found in January in the present year a vast number of broken vessels of the very same description, and immediately associated with lamps and other Arabic pottery. One perfect specimen of conical form, which I have placed in the British Museum, is coated with a glaze of greenish blue identical with that found upon numerous Arabic lamps found in the same mounds, which are formed of the *débris* of the Arabian city of Fostat, and contain antiquities of no other period.

Note.—The translation of the Talmud Tract on the Measurements of the Temple, published in the January number of the *Quarterly*, was written by the Rev. Joseph Barclay, D.D., lately of Jerusalem.

LIST OF NAMES EAST OF JORDAN.

The following list of names was collected by Captain Warren during his reconnaissance survey of the country East of Jordan. The Arabic orthography is that of the dragoman who accompanied the party, and the transliteration and interpretation were kindly supplied by Dr. Sandrezcki, of Jerusalem :—

العواقية Al 'Awâkyêh. [عَوْق the bend of a valley.]*

قصر نواقيس Kaṣr Nawâkîs, pl. of *Nâkûs*, signifying a board or plank of hard wood, which serves instead of a bell in the Oriental churches.

الشماساني Ash Shamâsâni, perhaps a derivative from شمّاس *shammâs*, deacon.

الجرانين Al Jerânîn, or dual *jerâneïn* (جِران *jerân*, the interior part of a camel or horse's neck), *jarân* (جَرَان), angry. [جَرِين a threshing floor.]

رجم الرواق Rijm ar Rewâk, the tomb (heap) of the portico.

تلّ البِرْكَة Tell al Birkeh, hill of the reservoir.

تلّ الكَو Tell al Kaû (perhaps from كاء v.a. كَوْء retreat, or from كُوّ window).

رجم الشوك Rijm esh Shûk (shok), the heap (tomb) of the thorns.

* The words between square brackets [ ] are a few suggestions which have occurred to me while passing Dr. Sandrezcki's MS. through the press.—E. H. Palmer.

ضهرة المُقْتا Dzahret (Dhahret) al Muḳtâ (the back, ridge, summit of the — (perhaps مَقْتي servant).
The pronunciation is against a derivative from قطع مُقْطَع.

جبل عجلون Jebel 'Ajlûn.

وادي البَيْضَة Wady al Beïdhah (of the egg). [Perhaps بيضاء "white (earth)."]

وادي الحمام Wady al Ḥamâm, Pigeons' valley.

وادي يجوز يتلاقوا في الزَرْقاء Wady Yajûz. Three valleys which meet at the Zerkâ زَرْقاء.

امّ حلالافيّة Umm Ḥalâlâfiyeh. [حَلَافِيَّة *Halâfiyeh*, fruitful in the plant, *half*, "a sort of feathery reed"].

الجَبَايَّهات Al Jâbâyyahât. [جَبَاءَة natural reservoirs of water.]

طلعة العالي (عَلِيّ) Ṭalâ'at al 'Ali (ṭalât), aspect (face of the high one). [*Talát*, a small path or gully by which one can ascend a mountain.]

قصارة ثُغْرة Ḳaṣâret Thoghra (*ḳaṣârah*, shortness; *ḳuṣârah*, house, chamber, small portion of). Probably *Ḳaṣârat ath thoghreh*, bend of the neck (between two mountains or valleys).

خربة امّ الضِباع (ضبّع) Khirbet Umm adh Dhabâ (sing.) Dhibâ'a. The ruin of the mother of [*i.e.* abounding in or frequented by] the Hyena or Hyenas.

راس الصِيرة Râs as Ṣîreh, head of the fold.

الطَبَقَة Aṭ Ṭabaḳah, stage, story, floor.

ضهرة حمار Dhahret Ḥemâr (back, ridge, summit of the ass). [This form does not occur in Arabic proper. ضهر would mean a "mountain top," ظهر "a back."]

الروادِق Ar Rawâdiḳ? [Perhaps from رَدِغ *radigh*, "a muddy spot." The Dragoman is likely to have been misled by the pronunciation of the Bedawîn who pronounce ق as our *ch*, and in some parts as our hard *ġ*.]

خربة صار (صارة) Khirbet Ṣâr (ruin of the صارة ridge, summit).

الكُرْسِيّ The throne, seat.

امّ حنابطه Umm Ḥanâbiṭeh (?). (حَنَابِج small ants.) [Perhaps from عُنْبُطَة "compact," ع and ح often interchange in the Bedawi dialect.]

خربة ضابوق (ضيوق) Khirbet Dhâbûḳ (?).

خربة خَلْده Khirbet Khaldeh, perhaps from خَلْد mole.

خربة الصَقرة Khirbet as Ṣaḳrah, perhaps = of the hawk [also the name of a tribe of Arabs in this neighbourhood, the Beni Saḳr].

رجم الغماق Rijm al Ghamâḳ (?). *Rijm* signifies "a cairn."

رجم الشِبّها Rijm ash Shibhâ. [شُبُهَان *shubuhân* "wild thyme."]

جربة الصفاويه Khirbet aṣ Ṣafâwyeh. [صفاء "bare rocks."]

سهل الحِما Sahl al Ḥimâ (حِمَّي and حماءٌ) prohibited, a thing prohibited, hence *territorium* (*arcis*). The plain of the prohibited ground.

رجم جَعَاصة Rijm Jaʿâṣah (جَعْس *Jas, merda, stercus*).

خربة الحواية Khirbet al Ḥawâyeh (?). [أَحْوِية "tents of goats' hair."]

رجم عُمَر ابو المَخَامِر Rijm Omar Abu 'l Makhâmir (?).

رجم البَحار Rijm al Baḥâr (perhaps *baḥḥâr*), the cairn of the mariner (بِحَار regions, gardens, pools).

رجم ابو معوايض Rijm Abu Mawâîdh (?).

رجم الوابضة Rijm al Wâbidheh (?).

وادي الصَقرة Wad(y) aṣ Ṣaḳrah, vide *suprá*.

البتّ Albett (?), separation, one who goes away, vanishes.

وادي الارنب Wad(y) al arnab, the valley of the hare.

تلّ الميسة Tell al Mîseh, hill of the (?).

بلاد اجحار Belâd Ajḥâr, the region (tracts) of *Ajḥâr* (which may also be translated, of dens).

بيض احمار Baïdh Âḥmâr (Himâr), the white tract of Himár, or the ass.

وادي المايه Wad(y) al Mâyeh (perhaps مِأَيَة of the hundred, or *al ma* (vulg. مُويَة *moyeh*) of the water.

رجا الوسط Rijm al Wassaṭ, the cairn of the middle.

وادي دير عَبَار Wad(y) Deïr 'Abâr, valley of the convent of *'Abâr* (?).

وادي جحرة Wad(y) Jaḥrah (the valley of the den).

مَكْسَر Maksar (Makser) a trunk, stem.

البِكْرة Albikreh, the Virgin.

المرقب Almarḳab, the look out.

العَوَاتِية Alàwâtyeh (?) (العوالي perhaps *alàwály*) [or عواقيه see the first page of this article].

طحين Ṭaḥîn, meal, flour.

الجَحار Aljahâr (perhaps *al Ajḥâr*, see above).

النَوَبْلسيّة Annawablissiyeh (?).

وادي الظلامة Wad(y) Adz dzalâmeh, the valley of darkness.

وادي الدالية Wad(y) ad dâlyeh, valley of the vine (vine-arbour) or water-wheel.

وادي السير Wad(y) as Syr (?), *Seïr* = marching, journey, expedition.

كرم ابو شيبان Karm Abu (y) Sheïbân, the vineyard (plot) of Abu Sheïbân.

مطال السيرة Maṭâl as sŷreh. [Extension of the march.]

شجرة الضراع Shajret adh dharâå.

واد(ي) الاشتا Wad(y) al âshtâ, شتًا a rough place, the head of a valley (*shitâ*, winter ?).

قَرَيْعَه منصورة Ḳaraïâh Manṣûreh (قَرِيعَة the best part of a house; the second word is apparently a proper name; it signifies protected).

خربة القصير Khirbet al Ḳiŷṣr (Ḳasîr). [*Khirbeh*, "ruin," *Ḳoseir*, "a little palace."]

خربة العَوَالِيَة Khirbet al 'Awâlyeh (perhaps العَوَالي high tracts of land).

مغارة الدير Maghâret ad deïr, the cave of the convent.

خربة نيني Khirbet Nînî.

واد(ي) بلال Wad(y) Balâl (Belâl), valley of moisture.

خربة سعادة Khirbet Sâådeh, ruin of Saädeh (blessedness, bliss).

تلّ العريمة Tell al ârŷmeh, hillock of the foss or moat.

خربة دُبّة Khirbet Dubbeh, the ruin of the she-bear.

كنيسة الخِضْر Kanîset al Khidhr, church of Elias (St. George).

كنيسة صارة Kanîset Ṣârah, the church of the ridge, but probably سارا *sârâ*, the church of Sara.

عين جزير 'Aïn Jazîr (is est quem incolæ pagi eligunt, ut vices eorum agat in expensis pro eo, qui a parte Sultani apud eos divertitur); perhaps جِزّير butcher.

ام إرقَيْص Umm Irḳaïs (perhaps from رَقّاص).

جسر خَيْضار Jisr Khaïdhâr, bridge of Khaïdhâr.

ابو طارق Abû Ṭâriḳ. [The father of (*i.e.* frequented by) "the benighted traveller," but perhaps the proper name of a man.]

جبل خَنْدق Jeb'l Khandaḳ, The mountain of the foss.

جبل ام عاوِيَة Jeb'l Umm Âawyeh, the mountain of the mother of the howling (*i.e.* jackal).

جبل ام بلاوط Jeb'l Umm Balâûṭ, the mountain abounding in Ballaut (perhaps بَلُّوط *Quercus Ballota*).

واد(ي) النهادي Wâd(y) ân Nahâdy [perhaps plural of نَهْدَة sand-heaps].

بيَر السبيل Bîr as Sabîl, the well of the road, a *sebîl* is a public drinking fountain bequeathed by some pious person.

واد(ي) الجريعة Wad(y) al Jarîàh, perhaps جُرَيْعَة draught of water.

واد(ي) الرمل Wad(y) ar Raml, the valley of sand.

ثُغْرَة السُجور Thoghret as sujûr (sajûr), the neck of heating, of fuel, or of water filling (the river).

طَلعَة رِيمة Ṭalàat Rîmeh the face, aspect (perhaps appearing), [طَلْعَة mountain path or gully] of the sepulchre (*Rîm*), or رِئم the white doe.

عرقوب الخِلال Arḳûb al Khilâl, mountain path, or summit of the interstice [fissure].

عين جريعَة Aïn Jarîàh, v. *supra*.

واد(ي) العظام Wad(y) al 'Idzâm, of the bones.

تَبعة السُوَيْمَة Tabàat as Suwaïmeh (what belongs—whether men or country—to Suwaïmeh).

السُوَيْمَة As Suwaïmeh. [سوام *sawâm*, cattle going to pasture.]

التوأمين At Toâmîn (perhaps *Toâmeïn*, the twins).

دلال Dalâl (*dallal*, broker, pedlar, hawker). It might also signify the guide.

شكارة النجار Shakaret an najâr (if *Shukret an nujâr*, it might be translated "redness of the colour.") (*Shakreh*, abundance of milk in the udder; *najjâr*, joiner, carpenter.) [Perhaps from شجار *shijâr*, "wood-work," the *k* being often pronounced *ch*.]

نَقْبُ عين جَدْي Naḳb âïn jedy, mountain pass of *'Aïn Jedy*, *i.e.* the fountain of the kid.

بلاد السِرّ Bilâd as sirr, the region (tracts) of the best part of the middle of the valley.

سوق الطعيمة Sûḳ aṭ Ṭâïmeh, market of her who is neither (lean) thin nor fat [proper name].

نقب القداد Naḳb al Ḳadâd, mountain pass of the hedge-hog.

خربة المرجة Khirbet al merjeh, ruin of the meadow.

واد(ي) الدِرباس Wad(y) ad derbâs, Wady of the lion (or the savage (biting) dog).

واد(ي) المشايدة Wad(y) al Mashâïdeh (perhaps *mushayyedeh*, a high edifice or one plastered with gypsum).

واد(ي) حَبَثا Wad(y) Ḥabathâ (perhaps *ḥabitheh*, the serpent with the truncated tail).

واد(ي) ام أَدْسَيْس Wad(y) Umm Âdsîs (probably *dasîs* = *dâsûs*, he who explores secretly).

واد(ي) الغاب Wad(y) al Ghâb, of the wood (or cane brake).

بِنايَة صقر Binâyet Ṣaḳr, the structure of *Ṣaḳr* (as nom. prop. [of an Arab tribe] signifying hawk).

شُوَيْنَة الذِّيَاب Shûweïnet ad diyâb, perhaps the granary of the *Dîâb* (nom. prop. [of a branch of the 'Adwân Arabs] signifying wolves).

واد(ي) أَفْضَيْل Wad(y) Âfdheïl (nom. prop.).

جبل السور Jebl as Sûr, the mountain of the wall.

تلّ الهلالي Tell al Hilâly (nom. prop. of the *Sheïkh Hilâl* هِلال =new moon).

وادي جَريعَة Wad(y) Jaryâh, see above.

وادي المهافة Wad(y) al Mahâfeh (may have some connexion with هَيْف a hot wind, S.W.)

وادي البحار Wad(y) al Baḥâr.

وادي نعور and ناعور Wad(y) Nâûr, the Wady of the water-wheel.

وادي ابو عَيْنَيْن Wad(y) Abu 'Aïneïn, the Wady the father of [*i.e.* possessing] the two springs.

وادي السِير Wad(y) as Sîr (?).

وادي اِدْلَيْق البقر Wad(y) Idleïḳ al Baḳr (?).

وادي امْعَلَقَة Wad(y) Amâlaḳah (?), (*Muàllaḳ*, "hung," "dependent").

وادي القِصير Wad(y) al Ḳiṣîr (*Ḳaṣîr*, short).

وادي الجحار Wad(y) al Jaḥar, see above.

عَرْقوب سَهْبا 'Arkûb Sahbâ, mountain-path (*Sahb*, desert, plain, سَهْبَة deep well), السهْبيل nom. *deserti cujusd.*

وادي عَبيان Wad(y) 'Abyân, وادِ القبر (or) او or Wady al Ḳabr, of the tomb (?).

وادي حصاصا (ة) Wad(y) Ḥaṣâṣâ (has perhaps connected with حُصّ crocus).

وادي الميطِرْضَة Wad(y) al Mŷṭirdheh (?), *Miṭredeh*, high way.

وادي عُوَيْضة Wad(y) 'Aweïdhah, nom. prop.

رُكْبَة المَتْخ Rukbet al Matkh (*Mittikheh*, a shepherd's staff), *Rukbeh*, a knee, also the root of a certain plant.

بَني نَعيم Bany Nâîm.

وادي النُوَيْطي Wad(y) an Nûweïṭy.

خشم المَرَاذة Khashm al Marâseh, the mouth [outlet] of Marâḍheh.

قلعة يَاعَيْن Ḳalàat Yâàïn. The fortress of Yâàïn.

سَاعة و إِجْرَابَة Sâàt u Ijrâbeh (*sâât*, "hour," *ijrabeh*, "having scabby camels," etc.), ? v. also *Ijraâbbeh*.

الطعيمة Aṭ ṭâîmeh (neither lean nor fat, fem.).

ميراج الحيران Mîrâj al haïrân (?). مِعراج ascension (especially Mohammed's to heaven) of the astounded one.

وادي قبر أَمْحَمَد Wad(y) Ḳabr Amhamed, of the sepulchre of Mohammed or Ahmed (في وادي المجحار), in valley of Jehâr.

وادي سَعِير Wad(y) Sàîr (ardent, fiery, fire, flame).

وادي الفار Wad(y) al Fâr (of the mouse).

قبر شَيْخ Ḳabr Sheïkh, Sheïkh's sepulchre.

جورة البَيْض Jôret al Baïdh, ditch of the eggs (also navel, middle of anything) (region).

تلّ الكَفْرين Tell al Kafreïn, the hill of the two villages.

وادى البُوَيْب Wad(y) al Bûweïb, valley of the small door (gate).

عين سُوَيْمَة Àïn Sûweïmeh, spring of Suweimeh.

البُوَارِضَة Al bûwaridheh (بارِض the first germs).

شُونة سُوَيْمة Shûnet Sûweïmeh, the granary of Suweimeh.

قلعة ام ابو الحُسَيْن Ḳalàt Umm Abu 'l Ḥusseïn, the castle of the mother of the father of Husseïn. [Probably ابو الحصين the castle frequented by the fox; which animal is called in Arabic the "father of the fortress."]

وادي النثوري Wad(y) al Nathûry (*nathûr*, she who bears many children).

وادي عيافة Wad(y) 'Ayâfeh (iyâfeh) of auguration.

خربة سُوَيْمة Khirbet Sûweïmeh.

وادي ابو الحُسْن Wad(y) Abu 'l Ḥusn (father of beauty). [ابو الحصين fox.]

نُقَيْب الرمل Nuḳaib ar Raml (the small mountain pass of the sand).

وادي مُشقار Wad(y) Mushḳâr (*Mushḳârr*, he whose hair is light-coloured).

خربة لِسْرا Khirbet Lisrâ (?).

خربة الكَفِير Khirbet al Kafîr (?).

خربة القوجيّة Khirbet al Ḳûjîyeh (*Kûj*, a female head ornament).

خربة المصلوبيّة Khirbet al Maṣlûbîyeh (derivative from *Maṣlûb*, crucified), place, ruin of the crucified. [This is a large cairn.]

جلول Jalûl (?).

ام العَمَد Umm al 'Amad (mother of columns).

التركمانيّة Al Turkmânîyeh, the Turkman (tract, etc.).

مَدِيَّبَة Madiyyabeh (?).

تلّ المسياج Tell al Massîâj (?) (*Sîâj*, hedge).

السامك As Sâmik (the high one).

جبل عتروض Jabl 'Atrûḍ (?).

زرقاء ماعين Zerḳâ Mâ'în.

الموجِب Al Mûjib, the efficient (also God). [The local pronunciation is *Mojib*, not *Mûjib*; it is not impossible that it may be connected with the name of the country Moab; the letter *j* is occasionally substituted for a semivowel; see Lane's dictionary (letter J ج).]

شِيحان Shîhân, long (*Sheïhân*, jealous, sedulous, long). [The Biblical Sihon. It is sometimes locally pronounced *Shûhân*, especially by the Beni Hamídeh.]

ام الرصاص Umm ar raṣâṣ, the mother of lead. [See "Desert of the Exodus," p. 500.]

السُوَاقة As Sûwâkah (*Suwwâk*, with long legs, *spathe* of palm-tree).

زملة العليا (عَلَيَة) Zimlât al 'Alâyâ ('Alâyah). *Zimleh*, group of small palm-trees. *Zumleh*, troop; *zemeleh*, family; *'alâyah*, high place.

لُبّ Lubb (heart, marrow, the best part of any thing).

العال Al 'Âl.

الدَير Al Deïr, the convent.

عيون موسي 'Uyûn Mûsa, the springs of Moses.

واد(ي) ابو النمل Wad(y) Abu'n neml, the Wady the father of [frequented by] the ant.

واد(ي) قرن كَبش Wad(y) Ḳar'n Kebsh (ram's horn).

ضهرة قرن كبش Dhahret Ḳar'n Kebsh, ridge (summit) of ram's horn.

جبل مُشقّار Jabl Mushḳâr, see above.

قبر عبد الله Ḳabr 'Abd Allah, sepulchre of Abdallah.

عرب المصلاحي 'Arab Almaṣlâḥy (?).

رجم اصرارة Rijm Aṣrâreh (Isrâreh) (?).

خربة ام رُمّانة Khirbet Umm Rummânah (mother of pomegranate).

جبل حوارة Jebl Ḥawâreh (?) (*ḥuwâr*, new-born camel).

تلّ الجلول Tell al Jalûl (?).

خربة ام العَمَد Khirbet Umm al 'Amed (mother of columns).

تلّ العريش Tell al 'Arîsh, mound of the bower, green cottage. [*'Arish* is also used in the Bedawí dialect for a "wooden hut" or "hovel"; it corresponds with the עֶרֶשׂ of Og king of Bashan, in Deut. iii. 11, translated in our version "bedstead," but probably signifying "sarcophagus."]

وادي الحَبيس Wad(y) al Habîs, *Habis*, a horse dedicated to pious uses.

خربة ام التين Khirbet Umm at Tîn, mother of the fig-tree.

جبل اَحْبَس Jebl Aḥbas, *aḥbas*, superlative of *ḥabs*, a large mountain.

خِربَة بَطيم Khirbet Baṭîm (?).

جبل الصوّانة Jebl aṣ ṣawwâneh (the mountain of the flint stone).

خربة ماسوح Khirbet Masûḥ (?).

خربة العال Khirbet al 'Âl (?), see above.

جبل اليدوديّة Jebl al Yadûdîyeh.

جبل المنحار Jebl al Minḥâr (he who slaughters many camels; liberal, munificent).

البَراك Al Barâk, a kind of water-fowl (white); *Birâk*, a kind of fish. (Probably *El Birak*, "pools.")

خربة ام الابراك Khirbet Umm al Abrâk (mother of the Barâk). *Birak*, "pools," (pl. of بِرْكَة which is the same as بَراك).

خربة بيت زُرْعَة Khirbet Beït Zurâat (of the house of seed or tillage).

وادي المَنحَر Wad(y) al Manhar, the Wady of the place of slaughter or sacrifice.

خربة ام الخَنَافش Khirbet Umm al Khanâfish (?) *Khunâfish*, lion. or *Khunfesá* (sing. *Khinfis*), beetles.

ام الكُنْدُب Umm al Kundub (?). [Probably جندب *Jundub*, a species of locust. I have before observed that the Bedwín east of Jordan pronounce *k*, *ch*.]

ام الرمّان Umm ar rummân (the mother of pomegranates), see above.

خربة ابو نُقْلَة Khirbet Abu Nukleh (*Nukleh*, migration).

جبل الضبارة Jebel al Dhabâreh, the mountain of firmness or compactness.

تلّ البِناية Tell al Binâyeh, the mound of the building.

واد(ي) نعور Wad(y) Nâûr.

ام قِصير Umm Kişîr (Kaşîr), see above.

ام السماق Umm as sumak (*Summâk*, *Sumach*).

مرج سَتْثا Marj Setthâ (?) (*setthâ*, meadow).

تلّ جُوايَة Tell Jûwâyeh (?).

سَحِيرة بَاعِث Sahîret Bâith (*sahîr*, he who has pain in the bowels; *bâ'ith*, he who sends, gives impulse).

خِرْبة بَلاعَث Khirbet Balâàth (?).

خِربة ماعين Khirbet Mâîn.

جبل المعالية Jebel al Mâlâyeh (?).

خربة زَبود Khirbet Zabûd (?).

خربة نبا Khirbet Nabâ. [=the Biblical *Nebo*.]

خربة المعلاقة Khirbet al Mâlâkah (Milâkah), the ruin of the thing dependent or adhesive.

طي طي Ţi Ţi.

جبل ام المدارِس Jebel Umm al Madâris (mother of the colleges, schools).

جبل الرجحا Jebel ar Rajḥâ (?)

خربة المرصاص Khirbet al Marṣâṣ (?) (see Umm Rasâs).

خربة ضهرة احمار Khirbet dhahret Aḥmâr (probably ضهرة حِمَار), of the back of an ass.

تلّ طحين Tell Ṭaḥîn (the mound of the meal or flour).

جبل فغار البَيْضار Jebl Faghâr al Baïdhâr (?).

خربة البَنايَة Khirbet al Benâyeh. [The ruin of the building.]

الجوايَة Al Juwâyeh.

السامة As Sâmeh, pit, vein (lode).

وادي المَشْحور Wad(y) al Maṣhur (?), صحر among other meanings, signifies to be ample, roomy, and also in the XI. conjugation to be of a russet hue.

اليدودة Alyadûdeh (?).

ضهرة جماعة Dhahret Jamâàh (the ridge or summit of assembly, assemblage).

خِربة دبّة الخمان Khirbet Dubbet al Khamân (of the *she-bear* of the elder), *debbéh* also means a vessel, sand, a sandy hill, flat ground.

خِربة السوق Khirbet as Sûḳ (of the market).

تلّ خمان Tell Khamân, the hill of elder.

خربة الذيذة (ذيذة) Khirbet az (probably *dh*) zîzeh (?), *lezîzeh* لذيذة agreeable. [I heard it pronounced *zîzeh* the full name being زيزة مشاش *zîzet emshâsh*, زيزأة means "a small hill," and *emshâsh* is Bedawî Arabic for "holes dug in the sand for water," "shallow wells."—E.H.P.]

جُوَايَة Juwâyeh.

وادي العماري Wad(y) al Amâry (?) (n. prop.).

رجم الفَهُود Rijm al Fahûd (fuhûd), heap of the "cheetars," or hunting leopards.

رجم الحواية Rijm al Hawâyeh (?), (the cairn of collecting, etc.).

ضهرة جزوع Dhahret Jazâà (*Jazûà*, impatient, *Juzûà*, impatience.

امّ الخنافيش Umm alkhanâfish, see above.

الصواوين Aṣsawâwîn, flints.

سَهلة المحلا Sahlet al Maḥlâ, plain of Mahlâ.

ارجَيم سليم (رجم سليم) Arjeïm Salîm (probably dimin. of *rijm*), the little cairn of *Salîm*.

هربكة الثَماض Harbaket ath thamâdh (?).

ضَبَّة مَشتَا Dhabbet Mashtâ, lizard of winter. مَشتَي (winter-quarters مَشْتًا).

خِرْبة بَرَازِيم Khirbet Barâzim (?), the ruin of Barazim.

الزبارات Azzabârât (?) (*Zabr*, stones). صَنَوبَر *Ṣanawber*, pine-tree.

ماسوح Mâsûḥ, v. 9, l. 4, from above.

سَهْل ام قِصِير Sahl Umm Kiṣîr (Kaṣîr), see above.

الدلالة Ad dalâleh, the guide.

المقايّين Al Maḳáyyín (?), *Mukâtalin* (?).

عراق الحمام Arâk al Ḥamâm, the rocks, rocky steep, of the pigeons.

ثغرة تصين Thogret Taṣîn, neck of Tásin (?).

القوسِمَة Al Ḳawâssimeh.

ثُغرة امّ رمضان Thogret Umm Ramaḍân, the defile of the mother of Ramaḍân.

امّ اصواوية Umm Aṣwâwîyeh.

بَحار Baḥâr (*Beḥâr* from بَحْرَة low ground, garden, pond, etc.).

مُنْطار عَمان Munṭâr 'Amân (?), (نَطَر to be watchman).

عبْدون 'Abdûn.

الصقَرة Aṣ Ṣaḳrah, see above.

عَراق عَيْشة 'Arâḳ 'Aïsheh, the rocks of 'Aïsheh.

واد(ي) عُش Wad(y) 'Ush ('Ushsh), the valley of the nest.

رجم امّ الرمام Rajm Umm ar ramâm (rimâm رُمّة rotten bones).

تلّ الشماساني (تلّ شماسَني) Tell esh Shamâsâny, see first page.

خِربَة المِرْقه Khirbet al Mirkah (the ruin of stinking wool). [مرقاة a ladder.]

رجم المَرْقَب Rijm al Marḳab, the cairn of the look-out.

امشارف (مَشَارف) eminences.

واد(ي) القطار Wad(y) al Ḳaṭâr (Ḳitâr), (قَطْر) rain, drop. قِطار string of camels.

جبل النواصف Jebl an Nawâṣif (ناصِفه a channel or rock in the middle of a valley; also a plain or field).

زمّلة الادعم Zimlet al Âdâm, for *Zimleh* see above; *Âdam* signifies a horse on whose breast or throat there is a white mark.

خِربة الكاف Khirbet al Kâf, the ruin of Kâf (?).

خِربة المَنْسِيّة Khirbet al mansîyeh (the ruin of the forgotten one, fem.).

تزرة تُصين Tezret Tuṣîn (?).

قلعة النواقيس Kalât an nawâḳîs (ناقوس board of hard wood, used instead of a bell).

وادي الحدادة Wad(y) al Ḥadâdeh (*haddadeh* signifies a female smith or worker in iron, fem.).

خربة عُرجان Khirbet 'Urjân, the ruin of the lame ones.

الملفوف Al Malfûf, the involved.

وادي الحمام Wad(y) al Ḥamâm, the Wady of the dove.

منبوعه من عبهرة Manbûaà min 'Abhareh (نبع a spring). عبهرة signifies a fleshy damsel.

جزيرة Jazîreh, island.

امّ الأَشْرَطِ Umm al Ashraṭ, mother of the vilest.

وادي الفصيل Wad(y) al Faṣîl, the Wady of the weaned (camel, etc.).

وادي العوجه (ماء) Wad(y) al 'Aûjâ, the Wady of the crooked stream.

وادي المُدَهدِرة Wad(y) al Mudahdahreh (?).

يسكب في البركه Yaskub fi'l birkeh, "it pours (act. s. neut.) into the pool." [Apparently a description of the last mentioned Wady.]

غور بسان Ghôr Basân. *Ghor*, a hollow, especially the low ground surrounding the Dead Sea.

جبل صفض Jebel Safadh (?).

وادي ماحِص Wad(y) Mâḥiṣ (perhaps sparkling).

وادي الازرق Wad(y) al Âzraḳ, the Wady of the blue one.

وادي اعضام Wad(y) Âàdhâm (?) (عِظام bones).

وادي الخِرقة Wad(y) al Khirkeh, the Wady of the rag, or of the swarm of locusts.

تلّ الجُلودي Tell al Julûdy, the mound of the skinner.

خِربة النوم Khirbet an Nûm, the ruin of Nûm.

تلّ سُوادة Tell Suwâdeh (*suwâd*, multitude; *sawâd*, blackness).

واد(ي) الدارس Wad(y) ad dâris, the valley of him who reads, learns.

يسكب في شعايب Yaskub fi Shảaîb, "it pours into the brooks."

قرية الفَحَيْص Ḳaryet al Fuḥeïs, the village of Fuheis perhaps (a proper name).

تِلال بطانة Telâl Baṭâneh (*bitâneh*, secret, middle of a town, region; friend; voracity).

عين قطف الضهور 'Aïn Kaṭaf al Ḍhuhûr, spring of the Kaṭaf (a certain tree) of the summits.

ماحِص Mâḥiṣ, see above.

واد(ي) الازرق Wad(y) al Âzraḳ.

قَرْيَة كِتّة Ḳaryet Kitteh, village Kitteh (كُتّة greens, كُتّة inferior kind of cattle, etc.).

خِرْبة صاطا Khirbet Ṣâṭâ (?).

نحله Naḥleh, bee. [*Nakleh*, palm-tree.]

رَيْمُون Reïmûn (?).

ساكِبة Sâkibeh, poured out, flowing (fem.).

تلّ الحدّاد Tell al Haddâd, the mound of the blacksmith. [But it is probably a proper name, *cf.* "Hadad the Edomite," 1 Kings xi. 14.]

تلّ العاصي Tell al 'Âṣy, the mound of the rebel.

خربة قجازة Khirbet Ḳajâzeh (?)

قرية هَمّتا Ḳaryet Hamtâ (?).

تلّ ضهرة المَقتال Tell Dhahret al maḳtâl, the hill of the summit of the maḳtal. (مَقْتَل *maḳtal*, slaughter.)

وادي الرميم Wad(y) al Remîm, see above.

وادي الصلاحي Wad(y) as Ṣalâhy, derived from *Ṣalâḥ*, good condition.

خربة الفوار Khirbet al Fawâr (*fuwâreh*, scum, froth; *fawwâr*, bubbling, spouting; *fawwâreh*, fountain).

وادي العَلَاقَوي Wad(y) al 'Alâfawy (?),

جبل ذي Jebl dzi (?).

جبل مَيْصَرَة Jebl Meïṣareh (perhaps مَيْسَرَة facility, prosperity).

مرج العَرْضه Merj al 'Ardheh, meadow of the Ardheh (?).

مرج الصوالحِه Merj aṣ Ṣawâliḥeh (from *Ṣâliḥ*, good).

خربة مشرافة Khirbet Mashrâfeh, the ruin of Meshrafeh (perhaps "eminence").

جَلَعُود Jalâûd (derived from جَلْعَدَ prostrate, or جَلْعَدٌ hard, strong).

خربة راجِب Khirbet Râjib (perhaps n. prop. derived from رَجَبَ = one who is afraid, ashamed, or respectful.) [Probably خربة راقب "the ruin of the observer," cf. *El marḳab*, see above.]

خربة علان Khirbet ålân (*ilân*, manifestation).

جبل امّ جودة Jebl Umm Jûdeh (mother of goodness).

تلّ الربض Tell ar rabdh, *rabadh*, a lair; *ribdh*, a herd.

الأَعقَد Al Âåḳad, the knotty.

هيشة الشمالية Hîshet ash Shamîlîyeh (*heïsheh*, a tumultuous assembly; *heïsh*, dirt; *shemal*, left, northern.)

ابو نُصَيّر Abû Nuṣcïr, diminutive of Nasr. [*Abu Nuseir* is the name of an Arab Sheikh in the East of Jordan district.]

مُوبَاس Mûbâs (?) [Mûbas.]

رجم المَقْتَاه Rijm al Maḳtâh (?).

ضهرة اشبيل Dhahret Âshbîl (?) (شِبْل a lion's cub).

واد(ي) الشَلَيحي Wad(y) ash Shaleïḥy (?).

ثغرة امّ غفرة Thoghret Umm Ghafreh, the defile of the mother of Ghafreh. (غَفْر young of the ibex (wild goat). Perhaps *ghafireh*, of the hairy (hirsute) one (fem.).

ضهرة اصنامه Dhahret Âṣnâmeh (صَنَم idol, pl. اصنام).

خربه المصطبة Khirbet al Maṣṭabeh (*Miṣṭabeh*, a stone bench).

عين امّ ربيع 'Aïn Umm Rabîà (spring, or the two spring months).

خربة المزار Khirbet al Mazâr (the ruin of the Mezar, *i.e.* place which is visited, as for instance, the tomb of a sheikh or santon).

واد(ي) الجثّة Wad(y) al Juththeh, the wady of the corpse.

واد(ي) الغزال Wad(y) al Ghazâl, the valley of the Gazelle.

المجدل Al Mejdel.

جبل العُشّ Jebl al 'Ushsh (nest).

جبل هوشع Jebl Hûshà (?).

جبل مَيْصَرَة Jebl Meïṣereh, see جبل ميسرة.

جَرَش Jarash.

العِمامة Al àmâmeh (imameh), the turban.

خربة دَبين Khirbet Dabîn (دِبْن fold).

خربة نجيب Khirbet Najîb (honourable, generous).

قلعة السلط (ص) Ḳalàt as Ṣalṭ, the fortress of.

أمّ عَبْهَرَة Umm Ábharah, see above.

قَرَيْعَة Kareïâh (Ḳarîâh), the best part, portion.

خربة الفحص Khirbet al Faḥṣ (of investigation), but *faḥs* signifies also an inhabited place.

خربة دجاجة Khirbet dajâjeh (of the hen).

بركة العمود Birket al Ámûd, pool of the column.

الحمود Alhamûd (the praised, praisworthy).

الرحا Arrahâ, the hand-mill.

شجرة الحَلَبَاطي Shajret al Ḥalabâṭy *(hulabiṭeh*, a hundred or more camels, etc.).

ابو طبنة Âbû Ṭibneh (father of intelligence).

واد(ي) الحَوْر Wad(y) al Ḥor (bottom, depth). حَوْر white poplar.

اليذيدية Al Yadzîdîyeh (Yazîdîyeh), the place or country of Yezîdîyeh.

خنازير Khanâzîr, swine.

الجِيعَة Aljîâh, the arrival.

الباقعة Al (بَقْعَة or بَقَاع) bakâà (a wide tract of land). [A tract of land between two mountains; this answers to our word "valley," *wady* signifying rather a dry watercourse.]

المَرامِد Almarâmid (perhaps connected with رَمَاد — رَمَدَ ashes). (مَرْمَد a place of ashes).

خربة الباشا Khirbet al bâshâ, the Pasha's ruin.

طَلّوز Ṭalûz (?).

شجرة المُؤْمِن Shejret al Mûmîn, al Mùmin (?).

وادي) امّ الدنانير Wad(y) Umm ad denânîr, the Wady abounding in dînârs (a gold coin).

وادي) الصُلَيْحِي Wad(y) aṣ ṣulâîḥy (perhaps *Suleïhy*) derived from صالح or صليح good.

باب صَفُوت Bâb Ṣafût (?), صِفِتٌّ large, robust, fleshy, victorious.

تَلُّ ٱلرَّشِيدِيَّةِ Tell ar Rashîdîyeh, the hill of the Rashîdîyeh (?).

رَقَّةُ عِيَالِ عليا Rakket 'Ayâl 'Alaya (according to the dragoman's pronunciation). رقّة is a tract of land along a river, exposed to inundation; عيال household, the people of Alayâ.

عُشُّ غُرَابٍ 'Ush Ghurâb, the ravens-nest.

اطويل الغربان Âṭweïl (according to dragoman's pronunciation) al Ghirbân, I cannot make out the meaning of *âṭweïl*; *ghirbân*=ravens.

خِرِبَةٌ سَمْرَاءُ Khirbet Samrâ, the brown ruin.

مَيْدَانُ ٱلْعَبْدِ Meïdân al 'Abd, the plain of the servant (slave).

خربة انواعمة Khirbet Anwâïmeh, the ruin of Enwaïmeh (?).

تَلُّ ٱلْعَلَائِقِ Tell al 'Alâîḳ, the hill of 'Alâïk (camels sent to carry corn).

عَقَبَةُ بَيْتِ جَبْر 'Aḳabet baït Jab'r, the steep descent of *baït Jabr'*.

خربة القبون Khirbet al Ḳabûn, the ruin of Ḳâbûn (Ḳaḳûn ?).

قَنَايَةُ ٱلْمَفْجَرِ Ḳanâyet al Mafjar. قَنَاة a canal; مَفْجَرٌ a place where water runs down.

خِرِبَةُ أُمِّ غفير Khirbet Umm Ghafîr, the ruin of the mother of Ghafîr (*i.e.* the protector or escort).

مَقَامُ عَلِيِّ بْنِ طَالِب Makâm Ali 'bn Ṭâlib, the station of Ali Ibn Ṭâlib.

قَلْعَةُ ٱلرَّبَدِ Ḳalât ar Rabd (perhaps ٱلرَّيْد cliff), the fortress of the cliff.

قَصْرُ ٱلْيَهُودِ Ḳaṣr al Yahûd, the castle of the Jew.

تَلُّ نَصْبِ ٱلْمَطَالِعِ Tell naṣb al Muṭâli'y, the hill of the sign (post) of the observer. [The mound of the stone erected upon the look-outs or beacons.

مطال مجار الزيت Maṭâl Mejâr az Zeit. *Mejar* (مجار sale), if not *matjar* (مَتْجَر merchandize); *zeit*, olive-oil; but I can make nothing of *maṭâl*.

وَادِ مقوق Wâdy Maḳûḳ (?).

وَادِ ٱلْأَبْيَضُ Wâdy 'lâbyadh, the white Wâdy.

شَجَرَةُ ٱلْأَرَاكَةِ Shajret al Arâkah, a species of prickly tree.

واد ابو التلاوول (وَادِي ابو (ابي) ٱلتُّلُولِ ?) Wady Abû 't Tulûl, (father of the hills).

طَلْعَةُ ٱلزَّعْرَةِ Ṭalât az Zârah. طَلْعَة a speech, face [gully]; زعرة the meaning of unknown to me. [Perhaps زعروط (vulgar for زعرور) "hawthorn."]

طَلْعَةُ ٱلتُّرْكِيِّ Ṭalât at Turki, aspect, face [gully] of the Turk.

وَادِي بَقَر Wady Baḳar, the Wady of the cows; *baḳar* is also a proper name.

وَادِي ٱلْمَصْلَايَةِ Wadi 'l maṣlâyeh (?).

وَادِي أُنْقُورِ ٱلذِّيبِ Wadi Unḳûri 'l Ḍîb, The Wady of the pit (hole) of the wolf. *Unḳûr*, a small pit like a dimple.

وَادِي ٱلْبَقِيلَاتِ Wady 'l Bakîlât, the Wady of vegetables (بَقِيلَةٌ).

خربة الطروني Khirbet aṭ ṭurûni. According to Captain Warren, *Oktrûneh*.

وَادِي ٱلْمُصِيرَةِ Wady 'l Muṣîreh (?).

خِرْبَةُ ٱلْعَوْجَاءِ Khirbet al 'Aûjâ, the ruin of El 'Auja (the crooked).

مطال ٱلذِّئِب Maṭâl aḍ Ḍîb. (*Dîb*, a wolf.)

عَيْنُ أَبُو (ابي) ٱلدَّرَج 'Aïn Abu 'ddaraj, the spring of the father of the stairs. [*Abu* = "abounding in."]

عَيْنُ أَبُو (ابي) ٱلْحَفَايِر 'Aïn Abu 'l Hafâîr, the spring of the father of the ditches.

طَلْعَة قرزلايية Perhaps طَلْعَةُ قُرْزَلِيَّةٍ Ṭalât Ḳurzeliyeh (?).

وَادِي قَرْنِ صَرْطَابَة Wadi Ḳarn Ṣarṭâbeh, the Wady of the horn of Ṣarṭâbeh (?).

نَقِيرُ حُرِّيَّةٍ Naḳîr Ḥorrîyeh, the foss of liberty (?).

سَدُّ حَرِيزٌ Sadd Ḥarîz, the guarded mountain (?).

طَلْعَةُ عَمْرَةٍ Ṭalât 'Amreh. عَمْرَةٌ any covering of the head; a small pearl. [Proper name, Amorite.]

طَلْعَةُ ٱلْمُصْطَارَةِ Ṭalât al Muṣṭâreh. مُصْطَارٌ wine (?).

وَادِي ٱلْقَنَاطِر Wady 'l Ḳanâṭir, the Wady of the arches.

جَوْقَةُ زِبْلٍ Jaûḳet Zibl, the dung heap.

نصب العسلا Naṣb al 'Aslâ, the sign (post) (statue), perhaps of the عَصْلَاءُ (*âṣla*), the lean (thin) (woman).

بصت حضيراك العيوش Baṣt Ḥadhîrâk al 'Uyûsh. (The transcription of this appears to be faulty).

قَبْرُ الطرق Ḳabr aṭṭurḳ, the Tomb of the *ṭurḳ*, perhaps *ṭuruḳ*, the roads, if not طارق *ṭâriḳ*, the diviner [or benighted traveller].

تَلُّ ٱلْمَنَارَةِ Tell al Menâreh, the hill of the minaret.

القنارة Al Ḳanâṭireh, the arches.

مَغَارَةُ أُمِّ أَبُو (ابي) ٱلْفُصُوصِ Maghârat Umm Abu 'l Fuṣuṣ, the cave of the father of the gems (or of the cloves of garlic).

ولي عبد القادر Wali 'Abd al Ḳâder, the sepulchral monument of Abd al Ḳâder.

جلافة Jalâfeh. *Julâf* means mud.

خربة اجاور Khirbet Ajâwer (?).

جبعة Jabâa (?).

بيت اعتاب Baït Âàtâb. *Bait*, house; عَتَبٌ step.

صناصين Ṣanâṣîn (?).

جَمْرين Jamrîn (?).

خربة العروق Khirbet al 'Urûḳ, the ruin of the roots. According to Captain Warren it is ٱلْعَرُوب *al àrûb*, which would signify the beloved or loving (wife).

خربة جالة Khirbet Jâleh (?).

بَقَار باقار Baḳâr. بَقَّار *báḳḳar*, the owner of (or dealer in) cattle.

بيت حَجار (بَيْتُ حَجّارٍ or بَنْتُ حِجَارٍ) Baït Ḥijâr (baït Ḥajjâr), the house of stones, or of the stone-cutter *(fajâr*, according to Captain Warren); perhaps *fakhkhâr* (فَخّار), potter.

خربة قُصَيْر Khirbet Kuṣaïr, the ruin of the little castle.

خربة ٱلْحَبَيْلَة Khirbet al ḥabaïleh (habîleh), the ruin of Habeileh, ropes (?).

بيت سقارية (بَيْتُ زكريا) House of Zechariah [?].

اسوقية perhaps شُوَيْقَة Shûwaïkeh.

جبل ركنادة Jabl Raknâdeh (?).

جبل ٱلْحَبون Jabl al Ḥabûn (*Abún*, according to Captain Warren).

عقبة عَابِد 'Akabet 'Aâbid, the steep descent of 'Aâbid = devotee.

وَادى خُلَّة ٱلعَصَافِيرِ Wady khillat (khullat al 'Asâfîr), Wady of the friend (masc. and fem.), or of the tree (a prickly one), or the desert of the sparrows.

شِعب دُقماق Shâb Dukmâk, the mountain-path of Dukmâk.

ثُغْرة الفِنجان Thograt al finjân, the defile of the coffee-cup.

قاعة الزيتونة Kâ'at az zaïtûneh, the plain of the olive-tree.

خِلّت العَيْسَة Khillat al 'Aïseh; perhaps خُلّة العَيْسَاء (or خَلْوَة), the friend (waste or solitude) of the locust (fem.), or of the fawn-coloured camel.—v. No. 67.

رأس صَلاح Râs Ṣalâh, the head (summit) of Salâh (goodness or integrity).

رَأْس المَطْلَع Râs al Maṭlâ, the head (top) of the ascent.

بطن المعْطي Baṭn al Mòṭî (the belly of the giving) (?). [بطن = the bottom of a Wady.]

خربة شُوَاحَة Khirbat Shûwâḥah (شُوحَة *Shûḥah*, perhaps kite) (?).

ضَهْرَة حُسَان (ظَهْرَة) Dhahrat (Dzharat Ḥasân), the summit or ridge of Ḥasân.

قَرْيَة الكَبُو Ḳaryat Alkabû, the village of Alkabû. [Perhaps قبو "gate."]

وَادِى أَبُو (ابى) بُكَيْر Wâdy Âbû Bukaïr (?).

قَرْيَة سعيدة Ḳaryat Ṣâideh, the village of Saideh.

خربة اللَوز Khirbat al Lûz, the ruin of the almond (-trees).

قَرْيَة صُوبة Ḳaryat Ṣoba. *Ṣoba* in Arabic means a bitter plant, also a heap, a store, etc.

وادِ نحالين Wádi Naḥâlîn (?).

عين فارس 'Aïn fâris, the spring of the rider.

ضهرة البَغْل (ظَهْرَةُ ٱلْبَغْلِ) Dzahrat al Baghl, the back (ridge) of the mule.

ثغرة حماد Thoghrat Ḥamâd, perhaps *ḥumâd*, the defile of Hamâd. [*Hamâd* in the Bedawî dialect means "gravel covered with flints."]

خِلّت المستاصي probably ٱلْمُسْتَعْصِي Khillet al Mustàṣî, the waste, etc., of the rebel.

وادِ الشامي وَادِى ٱلشَّامِيّ Wady ash shâmî, the Wady of the Syrian, or perhaps for ٱلسَّامِى the high.

ضهرة الأقطع Dzahrat al Âḳṭà, the back (ridge) of the maimed one.

مراح الجامع Marâḥ al Jâmià (of the mosque). *Marâḥ*, place whence and whither people go in the evening; *Murâḥ*, night-quarters of camels and cattle.

نبى دنيال (نَبِيُّ دَانِيَالُ) Nabi Dânîâl, the (tomb of the) Prophet Daniel.

وادى البجاجلة Wady el Bajâjaleh, the Wady of Baït Jâla (or of the people of Bait Jâla) (?).

خِلّت الصَنِع Khillat as Ṣanià, perhaps the waste (solitude) of the صَنِع (industrious), or صَانِع (artist).

وادِ بير الصليب (وَادِى بِئْرِ ٱلصَّلِيبِ) Wady bîr aṣ Ṣalîb, the Wady of the well of the Cross.

ابو سُود Âbû Sûd, father of blacks (negroes); or of dominion; or perhaps سُعُود (felicity, and nom. prop.); or سُعْد an aromatic plant.

خربة كبّار Khirbet Kebbâr (ruin of). Perhaps *kubbár*, vulg. for كَبَر (*kabar*) the caper plant, or "the great man."

Concluding Remark.—The nomenclature given above is exceedingly doubtful; my remarks are mere suggestions, which may lead to sounder conjectures. Had I been able to take down the names on the spot I might have been more successful, but as the mere interpreter "*multa possum nescisse.*"

Jerusalem, *Nov.* 22, 1867. Chs. Sandrezcki.